

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[PRICE 6d.]

WHEAL ANNA.—EIGHTY (936th) SHARES IN WHEAL ANNA Ferranzabulo, Cornwall, TO BE SOLD, A BARGAIN, either separately or together. The mine is now got into work, and raising sufficient Jack to pay working expenses, with fair promise of early and valuable returns.—Apply to the Rectroacting Fire-Bar Office, 20, Little Tower-street.

NORTHAMPTONSHIRE GREAT CENTRAL COAL MINING COMPANY.
Capital £21,500, in 21,500 parts, or shares, of £1 each, paid up, and no further liability.
To be conducted on the "CO-OPERATIVE PRINCIPLE."
Held under lease for 49 years, from the 29th day of September, 1854, at a royalty of 1s. per ton.

COMMITTEE OF MANAGEMENT.
Mr. JOSEPH ADNITT, merchant, Bridge-street, Northampton.
WILLIAM BUTCHER, Esq., Cotton Road, Hardingstone, Northampton.
Mr. JOHN DULLEY, ironfounder, St. John's-street, Northampton.
Mr. SPENCER JONES, shoe manufacturer, Drapery, Northampton.
Mr. JOHN LILLYMAN, brush manufacturer, Gold-street, Northampton.
Mr. ROBERT MILLS, clothier, Bridge-street, Northampton.
WM. PORTER, Esq., St. Andrew's-terrace, one of the aldermen of Northampton.
BANKERS—The Northamptonshire Banking Company, Northampton.
SECRETARIES—Mr. N. W. Freeman, Market-square, Northampton; Mr. John Jones, Union-street, Northampton.
SOLICITORS—Messrs. Hulme and Foyster, Manchester.

OFFICES.—MARKET SQUARE, NORTHAMPTON.

PROSPECTUS.

The period having arrived when a combination of fortuitous and most advantageous circumstances, both of a local and general nature, have greatly enhanced the importance so long attached to the discovery of coal in the more southern portions of the kingdom, it has been resolved to form a powerful company for the purpose of resuming operations at the Kingsthorpe shaft, which several years ago, though then presenting such high promise of a successful issue, were obliged to be suspended for the want of adequate capital to carry on the works.

The property on which this mine is situated consists of 105 acres, lying in the parish of Kingsthorpe, near the turnpike-road leading to the populous town of Northampton, about two miles distant. The works to which it is now desired to invite the particular attention of the general public were commenced (for the discovery of coal) on the northern verge of the middle oolite strata, and were continued to a depth of 160 fathoms. In the course of this sinking, a number of facts of the most encouraging character were developed, and which have far exceeded the most sanguine expectations of persons conversant with the geology of the neighbourhood.

The formations of the lower oolite, lias and red marl, which geologically intervene between the site of these works and the great coal formation, were found to be very much thinner than their general estimated thickness, and at the period of the suspension of the works there was the strongest evidence for believing that the miners had actually penetrated some distance into the coal series, especially as a conglomerate rock, 6 feet thick (exactly similar to the one existing in the same geological situation, and resting on the coal measures in Staffordshire and Leicestershire), was found at the base of the red marl formation, and in the lower beds of which a strong brine spring was discovered.

It is almost unnecessary to observe, that independently of the highly encouraging prospects now so palpably exhibited of the discovery of coal in this part of England, it is a consideration of the greatest consequence to landed proprietors, and to the local interests generally, and when viewed in connection with the recent important discoveries of inexhaustible iron ore beds (thousands of tons of which are weekly sent out of the county to be smelted) in this immediate neighbourhood, the Great Central Coal Mining Project, may be truly said to assume an aspect of great national importance. In order to carry out this project, it has been deemed advisable to raise a sufficient capital in the outset to erect a powerful steam engine, and to meet all contingencies which may possibly arise in the progress of a work of this character; and it is confidently expected—from the various and very inviting circumstances shown to warrant so strong a belief in the success of the undertaking, to say nothing of the present high price of coal—that the shares will be rapidly taken up, and that the operations will again shortly be in a state of full and effectual progress.

The projectors propose to raise a capital of £21,500, in twenty-one thousand five hundred parts or shares of £1 each, the sum provided being much larger than it is considered will be requisite to meet every contingency.

It has been made a fundamental principle in the rules of the company that the mine shall never be in debt, and that every account shall be paid monthly, and that no shareholder shall be liable for more than £1 per share.

Applications for prospectuses and for shares may be addressed to Mr. N. W. FREEMAN, sharebroker, Market-square, Northampton; Mr. THOMAS LEWIS, sharebroker, St. George's Chambers, High-street, Birmingham; Mr. LANE, mining agent, 33, Threadneedle-street, London; Mr. EARL LANGSTON, stock and sharebroker, Queen's Chambers, Manchester; Mr. JOHN HARRISON, mining and sharebroker, Liverpool; Messrs. CROKER and Co., brokers, Plymouth; Mr. W. H. BAUMEY, broker, Bridge-street, Bath; to the secretaries, the solicitors, or to any gentleman of the committee.

FORM OF APPLICATION FOR SHARES.

To the Committee of Management of the Northamptonshire Great Central Coal Mining Company.

I request you will allot me _____ shares in the above company, of £1 each, and I hereby engage to take the same, or any less number that may be allotted me, and I undertake to pay the bankers of the company £1 on each allotted share when required to do so.

Reference _____ Address _____
Date _____ Occupation _____

* This quantity may be extended to 300 acres, or more, if required by the company.

NORTHAMPTONSHIRE GREAT CENTRAL COAL MINING COMPANY.

REPORT OF MR. ROBERT BEAUMONT, OF LLANDAFF.

Northampton, Aug. 29, 1854.—In consequence of an application on behalf of the Northamptonshire Great Central Coal Mining Company, I have examined the property at Kingsthorpe, with a view to ascertain the quality of the minerals, with their approximation to the coal fields in the western districts. At Kingsthorpe, two pits or shafts have been sunk several years ago, to the depth of about 320 yards or 160 fms.; the journal given of the several strata passed through in the course of sinking these pits, and the appearance of the metals as seen on the surface, indicate in strong terms that they belong to the series of red and white marl stone, or lower range of oolite strata. They appear also to have sunk through the red and variegated marls and new red sandstone, and thereby have approached the red conglomerate, magnesian limestone, and conglomerate, which are embedded next to the coal measures. Finding this to be the case, I have examined the strata in Warwickshire, where the easternmost collieries have been opened, and I find them nearly the same range of strata; as also at Coventry the same rock is found. This stone completely resembles the Bath stone, both in texture, colour, and position, under which coals are now being worked, and which a few years ago it was considered coal did not exist; but by perseverance to a considerable depth, the coal was discovered, and I believe I may add, the success of this undertaking was accomplished mainly through my own recommendation to persevere in the execution of their trials. I find the course of these measures range from Coventry towards Rugby; there the lias limestone is found in good quality, embedded in the marl, which is made into very fine bricks and pipes, and the limestone ranges along for several miles. Now, as the limestone marls are also found at Kingsthorpe, it shows a very strong analogy that the coal measures will be found there also, to the depth of about 320 yards or 160 fms. I have very powerful instigation for going into and persevering in this discovery, which is that one-half of the work has already been accomplished, by having these two pits, which are already sunk down 160 fms. In Warwickshire the pits are fully this depth, and new works are being opened to a considerable additional depth, and one colliery has been working coal to the lower or deep side of the pit, and they find the quality of the coal there to improve. There have been dislocations met with in the strata, the effect of which is to raise the different minerals 100 yards perpendicular nearer to the surface, in an easterly direction; this is so far favourable; and there is no doubt that others of a similar nature and effect will occur. These occurrences of nature are found to be of the very greatest utility, by preserving the coal and other strata within a reasonable distance from the surface of the earth, for without these the several strata would descend to a depth beyond our reach. In consequence of having met with a salt spring at Kingsthorpe, in the bottom of the shaft, with the limestone on the surface, it may not be out of place to mention that in the Northamptonshire district they have also got the limestone at the surface, and very strong saline springs below, from which large quantities of salt are made, and some of these coal pits are 300 fms. in depth. A pumping-engine of about 100-horse power, and a winding-engine of about 50-horse power, will be required. The late discovery of extensive iron ore in this district fully warrants a searching attempt for the discovery of coal, as there will be a great increase in the population; but had iron ore not been discovered, there is sufficient market to warrant a large expenditure in the production of coal in the immediate district. In the event of coal being met with, the winding-engine proposed will be found equal to raise at least 300 tons of coal per day; this may be considered equal to 75,000 tons per annum.

The amount of sales and charges, to be taken in a moderate way, I should state as under:—

Amount of sales of 75,000 tons at 12s. 6d. £45,000 0 0
Ditto, charges on obtaining ditto, at 7s. 6d. 25,200 0 0

Profit—Balance £19,750 0 0

Should you require any further information or assistance, it will be given with pleasure by your obedient servant, ROBERT BEAUMONT, Llandaff, Cardiff.

THE GLASGOW METAL MARKET. PIG-IRON SHIPMENTS.
PRICES CURRENT, &c.—The MERCANTILE ADVERTISER, published at Glasgow every Tuesday morning, reports the state of the GLASGOW METAL MARKET, and contains the WEEK'S SHIPMENTS OF PIG-IRON, foreign and domestic, at ALL THE PORTS IN SCOTLAND.

The MERCANTILE ADVERTISER (incorporated with the National Property List) is the best medium in Glasgow for ADVERTISEMENTS of property, ships, and merchandise. No Glasgow newspaper enjoys so large a circulation in places of business. Published every TUESDAY morning at 12, Royal Exchange-square, Glasgow. Subscription, 25s. per annum, sent by post. Money orders payable to Mr. Andrew Moody.

PUBLIC CONVEYANCES.—TO CARRIAGE BUILDERS, INVENTORS, &c.
In the press, and will shortly be published, with illustrations, price 1s. 6d.,

THE PUBLIC CARRIAGES OF GREAT BRITAIN:
being Glances at the Rise, Progress, Struggles, and Burdens of Internal Conveyances, with Suggestions for the Increase of Accommodation at Cross-roads, Railway Stations, and districts not supplied with steam transit. This book will be produced under the direct patronage of the Stage Carriage Trade, as to which Parliamentary enquiry is anticipated to take place next session, being, therefore, an important medium of publicity. Illustrated designs and descriptions of carriages will be inserted.—For terms, address Mr. BEADFIELD, 13, Strand, London.

Parties interested in the supply of cheap, regular, and convenient conveyance for the millions, are solicited to assist this object by circulating a work containing information as to the position and burdens of our public horse vehicles. Price to subscribers supplied on application, as above.

LOVERS OF FISH.—ONE HUNDRED GENUINE
MINIATURE BLOATERS FOR SIX SHILLINGS (package included), forwarded to all parts of the world by penny postage stamps (or post office order preferred). Address: THOMAS LITTLE, jun., fish curer, Great Yarmouth. Plain address, with country and nearest station.

APETITE AND DIGESTION IMPROVED, AND HEALTH PROMOTED, by the habitual use of that most agreeable condiment, **LEE AND PERRIN'S WORCESTERSHIRE SAUCE.** Applicable to every faculty of diet; and sold by the principal dealers universally.

ENNO'S VIEWS ON THE IGNEOUS THEORY, AND THE EARTH'S NATURAL LAWS—No. III.—(Continued.)

Sir,—I will not carry these subjects further in this letter, but would call on my brother practitioners to be very particular in noting and booking every occurrence they see in nature. This will reveal its laws, and be useful to posterity, when we are returned as food to our mother earth.

By way of drawing their attention, I will make some remarks on granite, followed by a few questions, which may throw a shade of light on the apparent obscurity of mining. A great deal has been said from time to time on its being primitive rock, or the basis of the earth, and found to be increasing in heat as we descend in depth. Can any one point out a flow of hot water in deep mountain granite? Is not granite rock so cold in the deepest mines as to make the men avoid sitting on it? There is no perceptible warmth in it. What is real granite? I believe the component parts of the Devon and Cornish granite to be genuine; and wherever it is found, in any quarter of the globe, it produces the oxide of tin. Next look at the outcroppings of granite in Cornwall and Devon, where we shall find the intermediate space filled with a mass of the earth, and found to be increasing in heat as we descend in depth. Can any one point out a flow of hot water in deep mountain granite? 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CRADDOCK'S ENGINE AT HAYTOR CONSOLS MINE

THOMAS CRADDOCK.
CRADDOCK'S ENGINE AT HAYTOR CONSOLS

Oct. 18. H. E. MICHEL, B.A.

THE GOLD QUESTION. M. MICHEL'S ATTEMPTS

All these rivers, with the exception of the Don, would afford shelter and harbours for vessels drawing 8 ft. The timber is of the most valuable description, and yields an unlimited field for the occupation of the sawyer and splitter. To give your readers a practical idea of what I describe, I saw a stump was pointed out to me as the remains of a tree that had yielded 11,000 36 ft. pullings for the Melbourne market: about 8 ft. from the ground it measured 36 ft. round, and the head branches laid where they fell, exactly 200 feet from the stump. I saw before I made this statement, and I am sure, that you may feel, except that it assures you of a fact that a district so important as

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H. G. DREW.

commerce laying in our railroad at the incline shaft in about a fortnight, and in about six weeks we hope to be able to draw from the 30 fm. level. We are still engaged in making additions to our tin dressing-floor; this we are obliged to do for a month to come. We have some of our buddies and frames set, but have more to do before the winter sets in. The machinery is now in a very good state; we have been putting in new nozzles to the whim-engine. We have

second boiler to work at the great engine, got the boiler-house rebuilt, and nearly covered; the bursting of this boiler was a most unfortunate circumstance, but I am thankful to say that we have nearly got it all right again.

Our operations on the copper lode are as follows:—The sinking of the new shaft from the surface, by nine men, at 14 ft. per fathom; driving the old shaft, to the 30 ft. level, by five men, at 8 ft. per fathom. Last month we were driving the old shaft, to the west towards the new shaft, by four men and two boys. Since last setting-day we have not been able to do anything in the shaft, in consequence of the air being so bad. I have thought it best to suspend the driving for about a month, at which time we expect to have sufficient water to work the water-wheel, which blows in air, then we shall have a sufficient quantity of air to do what we think proper on the copper lode. We shall be able to drive the end pit in time for the shaft; there are about 10 fms. to drive to get under the shaft (as will be seen by the rough section which you will find enclosed). I thought by sending you this sketch you would be better able to see what has been done on the copper lode, likewise to show the relative position of the workings with those of the tin lode. I have marked the spot where the copper ore has been found; there is a very promising lode gone down in the bottom of the 30 ft. level (at the place shown in the sketch); the lode at the present time is worth 25 ft. per fathom, in ground that can be stopped for 31 ft. per fathom. I repeat what I have said, that I believe there is a large quantity of copper to be found on this lode; it will take time to open up the lode. When we get the new shaft down to the 30 ft. level, we shall be in good condition to work it to any extent thought proper, at the same time being able to open on the branches out in the cross-course further north. The new shaft is sunk 23 fms. from surface; we are sinking at the rate of 3 fms. per month.

It was then resolved that the above accounts, with the report, be received and passed; that a call of 2 ft. per share be made, payable in 14 days; and that Messrs. Hinds, Munt, Kennedy, and Spalding, be appointed the committee of management for the ensuing three months.

The meeting then terminated with a vote of thanks to the chairman, for his able conduct in the chair.

TRELEIGH CONSOLIDATED MINING COMPANY.

A general meeting of shareholders was held at the offices, Old Broad-street, on Wednesday, Mr. G. B. Carr in the chair.

Mr. NICHOLSON (the secretary) read the notice convening the meeting, the minutes of the last meeting, which were confirmed, and the following report from Capt. Prince:

I regret to say, that the lode at Garden's and Christie's shafts having had a fair trial, it is my opinion no good results would be obtained by a further development. The greater part of the lode, which was discovered to the west of the cross-course, in the 100 ft. level, and which produced such a good parcel of ore a few months ago, has not realised our expectations. We extended the cross-cut on the cross-course north in the 90, out the lode driven on its course, and rose from the 100 to communicate to it. The lode continued large, regular, and productive, until it reached the elvan course, which being a hard, grey porphyry, is unfavourable to produce mineral of any kind, and it crossed the lode, which is also an unfavourable symptom. I have made a correct drawing of the dip of the elvan, showing its intersection of the lode, and the effects caused thereby, which I hand you. In the 110 ft. level the lode has been discovered west of the cross-course; it is large and regular, and the indications are favourable to produce copper, but as in the 120 ft. level the same small, crystalline, hard grey porphyry exists, I cannot but come to the conclusion to recommend you to abandon the operations in this part of your property, and dispose of the engine, pitwork, and other materials, which will not be required in developing the new ground. An estimate of the value of the engine, &c., I will present you. I have carefully surveyed the new ground, and have correctly laid down the lodes in their proper positions and bearings, together with the great cross-course and the elvan course, dipping 4 ft. in 100 fms. from the surface, being 80 fathoms from Good Fortune's shaft, and 100 fms. from the Wheal Harmony shaft. The new ground has been found to be productive near the great cross-course, and they are 250 fathoms south of the Good Fortune and Shanger lodes; but all the lodes in the vicinity of Treleigh run nearly parallel with each other. Carr's engine-shaft is in course of sinking by nine men; it is 14 fathoms below the surface, and the ground, I am glad to say, continues most favourable for mineral deposit, and for exploring. I say so, because the rock is traversed by numerous veins of peroxide of iron and quartzose veins, accompanied by copper ore of good quality, dipping towards the main lode. We are at the present time sinking about 4 feet a week, at 9 ft. per fathom, including every cost, and it is proposed to sink to the depth of the country adit, about 30 fathoms below the surface at this point, and then cross-cut the lode; for, although neither the Good Fortune or the Shanger lodes have ever been opened on in the vicinity of the cross-course in question, yet other lodes in the neighbourhood contiguous to it were found productive at a shallow depth. I am not prepared to say what time it will require to accomplish this object, in consequence of not knowing what kind of ground we may meet with in sinking, nor can we tell the exact distance we shall have to drive to cut the lode, because both the bearing and underlay may change very considerably; but the present aspect of affairs, looking now and then to the future, and the last general meeting would be required, after commencing operations, to reach the lode, and open on them. The masonry is going on satisfactorily, and if the present weather continues, the walls will be completed in a fortnight from this time; and as soon as the loading is put in the engine, we will proceed to erect the engine. The boiler, which was removed from Wheal Parent to Garden's, will be taken to Carr's engine; the improvements made in the pitwork at Garden's and in the engine itself, will enable us to dispense with that boiler, even if you continued the operations in the latter place.

A statement of accounts was submitted, showing a balance in favour of the company of £117. 19s. 2d., and of liabilities over liabilities £653. 8s. 2d.; but as among those assets 1360 unappropriated shares were included, the balance in round numbers may be taken at 3000.

Capt. Prince then entered into a verbal explanation of the character of the ground in the old mine, which he, in his report above, recommends to be abandoned; and also of the great promise of the new ground, which they were now proceeding to work, illustrating his remarks by diagrams. He showed that the Montague lode, in Wheal Harmony and Montague, had been most unusually productive; and as this on the south, and Wheal Mary on the north, also equally rich, had the Good Fortune lode in the centre, and all these were parallel lodes, bounded by the same cross-course, the inference was tolerably certain that large deposits of ore would be found in the latter. The Montague lode had been worked on at intervals, with profitable results, for a distance of seven miles. With respect to the Pevor tin lode, the level was 5 ft. deep in water, in consequence of the county adit being closed for four miles; but the end could be seen, and the lode rich for tin. It would, probably, cost 20000, to clear this adit, and as some large mines on its course were about being worked, it was most likely this desirable work would be effected, when operations on the tin lode would be resumed with expected profitable results.

On the motion for a vote of thanks to the chairman, the value of the engine and machinery on the old mine, which, if not of further use, should be sold to raise funds. Capt. Prince said he valued the engine, pitwork, &c., which would not be wanted at the new ground, taking off one-third of current prices, at 25000. 14s. 10d.; but to keep the water to allow them to get up the pitwork, the engine must pump 750 gallons per minute, which would require at least two months, and then they must wait three or four months more before they could realise, if they were immediately sold. It was at length decided, on the suggestion of the chairman, that they should manage at present without a call, call another meeting about January, and then further discuss the matter, as even at present the aspect of affairs, looking now and then to the future, and expected might turn up. The accounts were received and adopted, and the meeting terminated with thanks to the chairman, directors, and to Capt. Prince.

NORTH DOWNS MINING COMPANY.

A general meeting of shareholders was held at the offices, Old Broad-street, on Wednesday, Mr. G. B. Carr in the chair.

Mr. NICHOLSON, the secretary, read the notice convening the meeting, the minutes of the last, which were confirmed, and the following report from Captain Prince, the agent of the mine:—

Oct. 14.—In extending the 100 fathom level, east of west shaft, the lode for the last 25 fms. driving has been uniformly large and regular, and where the elvan is contiguous to it, it has been found whitish and decomposing; it wears a promising appearance, and good stones of ore have been produced. But in the greater part of the drivings, the elvan on both sides of the lode has been hard, grey, small crystalline rock, mineralised, and not at all favourable for copper. We have consequently thought it prudent to suspend operations in this end for the present, whilst we are making a trial in the 90, to which level we have now driven the water from the 100 ft. level, and driven about 60 fms. beyond the extremity of the 100, and for about 50 fms. of which the lode averages 2 ft. wide, ore throughout, and would be taken on tribute at 6s. 8d. in 11; the elvan in this level for many fathoms in length is not only white and decomposing, but it evidently dips 75° easterly, with a good lode of ore gone down, and we naturally supposed that the 100, though exceedingly hard, and could not be forced expeditiously, would eventually reach this favourable working and productive ground, and the 90 is driven into a limb of the dyke correctly shown in the plan, and the hard elvan has been in approaching it. We cannot at present ascertain the thickness of the dyke at this point, but from the 90 having driven the water from the 100 North Downs bottom level, which is 200 fms. apart, it cannot be very wide, and I have no doubt that a productive lode exists to the east of it; yet as one good level (the only one we have had) will not produce sufficient ore to pay the expenses of working the engine, &c., at Treleigh, without which nothing can be done, we have commenced making the trial above alluded to, as follows:—The water in the bottom of the level, having been powerful, a man-engine, made with materials on the mine, is fixed in the level about 10 fms behind the 90 end, and nine men have commenced sinking on the lode contiguous to the water, which has been approved of by other agents who have lately inquired the mine, will not only produce a good quantity of ore, but will prove whether it would be judicious or not to drive the 100 ft. level end, or abandon this part of the mine. From 2 to 3 months will be sufficient to effectually prove it, during which time the ore in the back might be taken away at a profit. Even these levels of ore ground similar to the 90, would make it a dividend paying mine, with all its enormous cost. East North Downs: We have been in the bottom level (30), but could not go more than 5 fms. to the east of the engine-shaft, the timbers having given away whilst the water was being driven from the 100 ft. level, and the water from the 100 ft. level, and the 100 ft. level, we have cleared and secured them for about 200 fms. in length, and having dilled the ground and mapped it, the plan will show more clearly than I can on paper the directions of the drivings. The bearing of the cross-courses, the dip of the shoots of ore, &c. In the deep adit and the 10 ft. level, west of engine-shaft, there is no lode to be seen; it is hove by a slide, and lost sight of. To the east of the engine-shaft, the lode is mostly taken away from the adit part of the lode is standing in whole ground, but in the 10 ft. level it is cut into and driven on for 10 fms., about 7 fms. of which produce 2 tons of ore per fathom. In the bottom is a better course of ore, and will produce 3 tons of ore per fathom. At the end will produce sufficient ore to pay for driving, but there is a part of the lode standing on the north, and its real value cannot, therefore, be known before it is taken down, which we shall commence doing on Monday next. The air is scarcely sufficient to enable men to work, but we have brought an air machine on the spot, which will be fixed forthwith, and in about a week from this time we shall have a pile of ore to surface. We have two parties of tribulators commenced working on branches to the west of the cross-course above alluded to, and they are doing well. I would observe that the 20 ft. level has not yet reached Bennett's cross-course, and is in whole ground. Although it is reported that a very productive lode is yet in the bottom of the 30, between the engine-shaft and Bennett's cross-course, I am certain a more favourable opinion of the ground from the 10 fathom level end to the county cross-course, which is whole from surface. A very able miner, who

worked for many years in an adjoining mine as a tribulator, and who has since become a mine agent of repute, having by my request inspected the mine, I beg to enclose his report for your perusal. He has made no remarks on the permanent dikes which I purpose to build to effectually keep back the county adit water, not professing to understand the matter, nor, have I alluded to it in my report, as it cannot be properly explained without the plans which will be laid before you. —P. PRINCE.

A statement of accounts was submitted, showing a balance in favour of the adventurers of 4664. 4s. 2d., and of liabilities over assets of 4741. 4s. 2d. Capt. Prince then entered into a verbal explanation of the position and prospects of the undertaking, illustrated by a diagram. They were now raising from the 20 ft. level, at East North Downs, 2 tons of ore per fathom, at which point ten men were about taking pitches, and they should certainly sample for the next fortnight. Nothing could be more encouraging than the prospects for the future.

Mr. HINDS observed that the old company who worked this mine were so successful that the shares, 125 in number, were sold as high as 10000, each, and Capt. Prince pointed out on the section the points from which the masses of ore had at that time been raised.—A private letter to Capt. Prince was also read, from an old miner who worked in an adjoining mine close to the county cross-course at East North Downs, eighteen years ago, and who stated that such a productive lode was scarcely ever before seen in the county, that their average raisings were from 800 to 1000 tons per month of rich ore; and that with the present high price for copper ore the mine was worthy of the most spirited prosecution.—A call of 10s. per share was then made.

The accounts were received and adopted, votes of thanks were passed to the chairman, directors, and manager, and the meeting separated.

CARBERRY WEST MINING COMPANY.

An adjourned meeting of shareholders was held at the offices, Adelaide-chambers, Gracechurch-street, on Wednesday, for the purpose of considering the future prospects of the company, and on general business.—Mr. PETER in the chair.

Mr. MANLEY (the secretary) read the notice convening the meeting, and the minutes of the former, which were unanimously confirmed.

The CHAIRMAN said he should be glad to hear the suggestion of any gentleman as to the best course to be adopted.

Mr. TINDALL said the only plan he had thought of was disposing of the reserved shares at 1s. each, subject to call, until they amounted to 10s.

The CHAIRMAN said they had received a very favourable report from the mines, which it might be desirable to read to the meeting. He then read the following report:—

The North Golden lode, I am persuaded, will, on development, turn out profitable, it having every desirable feature, and in perfectly ore-bearing ground. Had the engine-shaft been sunk 40 fms. further to the west, a portable engine, or even a whim, might have been employed for draining the water; by the aid of either, in all probability, important discoveries would, ere this, have been made. The lode is strong and continuous, and evidently improving going down; it can be traced on the back for more than ½ mile in extent, and in many places where it crosses out to the surface strong indications of copper may be seen. On review of the whole property, I cannot but again repeat that it is a valuable piece of mining ground. There are several real and well-defined lodes traversing the set, and in various places, where seen at the surface, are richly impregnated with real copper ore, and not micaceous matter stained with carbonate of copper, as a certain gentleman, who is certainly more humorous than sensible here, deigned to call it. I again repeat, as a real miner of long and extensive experience, and not a pretender, in contradiction to that individual silly scoundrel, that I believe the day is not remote when much mineral wealth in this locality will be brought to light, and I do not know a better field for mining enterprise, and I believe that with economy and judicious management valuable returns would be made, with a comparative small outlay.—P. TREVES.

A SHAREHOLDER wished to know what funds would be required to put the mine in good working order?

Mr. FOLEY said about 30000, would do wonders in working the two mines.

The CHAIRMAN said there was no question about its being a valuable property, and if 40000 were judiciously laid out upon it they might expect a good return. The course pursued by the Dublin correspondent of the *Mining Journal* was calculated to destroy all confidence in the Irish reports inserted in that paper, but from letters he had received from scribblers resident in the country, they were desirous the mine should be carried on.

Mr. LUCAS said he had never thought a doubt upon its being a valuable property, but his complaints from time to time had been that it was mismanaged both in London and Ireland; and it appeared to him very little had been done at the mine for the money expended, and if it was to be carried on there must be a complete reformation. The CHAIRMAN said there were 16,455 shares issued, and 13,545 in reserve, and in the event of his being able to find two or three friends to come forward with sufficient capital to properly develop the mines, he wished to know the terms the shareholders would be inclined to concede them.

Mr. LUCAS was of opinion that all parties would be willing to act most liberally, but he did not know what was required.

The CHAIRMAN felt satisfied, under proper management, they had a most valuable property, but it would require at the least about 15000, for efficient machinery, and 15000, to sink the shafts, although before that was expended they might raise some of that would pay part of the expenses.

A SHAREHOLDER wished to know whether the chairman had any proposition to make?

The CHAIRMAN replied that he thought, if fair terms were offered, he might induce parties to come forward with capital, but at present he had nothing definite to propose; the arrangement might cause delay in the present shareholders reaping the benefits.

Mr. LUCAS felt satisfied that distant prospects were far better than to wind up, and he would propose that Mr. Peter and Mr. Tindall be appointed a committee, to adopt measures for raising capital, such measures to be submitted to a general meeting, to be convened by advertisements inserted in the *Mining Journal*, and daily papers.

The resolution was seconded, and carried unanimously.

The CHAIRMAN said, though the Dublin correspondent of the *Mining Journal* might choose to twist slight remarks to suit his own peculiar views, they might rely upon his (the chairman) using his best exertions for the benefit of the shareholders.

Mr. LUCAS said, the publishing of the abstract of the accounts in the *Mining Journal* appeared to give great offence, but he had taken the amounts from the ledger, and he could not go into the explanation of every item. He had received the following letter from Mr. Foley, in explanation of the 3041. 9s. paid to him, which he read to the meeting, as follows:—

"On a late occasion, Mr. Lucas published in the *Mining Journal* that Mr. Foley received 3041. 9s. from the Carberry West Mining Company, for, as understood, I believe, by the shareholders, his visits to the mines, &c., and thus in consequence might be drawn that he was selfishly interested in the matter. Now, to put the matter in its true light, I beg to place before the shareholders an exact account of the moneys received from the company to the present date, and for what services, and thus leave the inferences, as to self-interest, to be drawn fairly and impartially. On reference to the reports in the company's books, I find I have made 14 visits to the mines, for which I have received a sum of 2421. 3s. 4d. I also received account of my account for costs of leases, and their attendant expenses as paid by me, and as furnished to the board, on my delivering up the leases to the directors and solicitors of the company, 621. 3s. 4d. On the 14 visits my travelling and personal expenses were at least 121. 10s. each visit, and thus for two years' salary, travelling on the company's business, and my own expenses, I find I remain a net balance to the credit of 671. 4s. 4d. a potential reason for self-interest, truly!"

Mr. LUCAS continued,—"That his only object in publishing the accounts was to furnish information to the mining community; but it was evident that the Irish correspondent of the *Mining Journal* was actuated by some personal feeling against Mr. Foley."

The CHAIRMAN said, that Mr. Foley had only received 3041. in two years, and that included legal expenses.

Mr. LUCAS said he had never complained of the amount, but merely published the fact for the information of the shareholders, and, therefore, hoped they would not mix him up with any remarks made by the Dublin correspondent of the *Mining Journal*.

The CHAIRMAN said, if they were to carry on the mines, the sooner they got to work the better; and he hoped, upon the next occasion, to meet them with more satisfactory information.

Mr. LUCAS said he had much pleasure in proposing a most cordial vote of thanks to the chairman, and trusted that the time would arrive when they would be able to offer him something more substantial.

Mr. HASTINGS seconded the resolution, which was carried unanimously.

The CHAIRMAN, in returning thanks, sincerely hoped his prognostications might become true; and they might rely upon his best exertions for the benefit of the shareholders. (Cheers.)

The proceedings, which appeared to give great satisfaction, then terminated.

THE MINING DISTRICTS OF SCOTLAND.—Mr. H. Seymour Trevelyan, the commissioner appointed under the provisions of the Act of 5 and 6 Vic., c. 99, to enquire into the operations of that Act, and into the state of the population of the mining districts, reports to the Secretary of State,—"Among the most striking deficiencies which I had occasion to point out some years ago in the large mining villages in Lanarkshire was that of an inadequate supply of water. After other much-needed measures had been carried into effect for the benefit and improvement of those large populations, several of the gentlemen connected with the district procured the formation of a water company, which for the last two years has afforded a full supply of good water to the town of Airdrie, and to the village of Coatbridge, and to the many thousands of persons congregated round the works of the Gartsherrie, Dundyvan, Summerhall, and other collieries. The collection of houses at Rosehall, belonging to the iron and coal works of Messrs. Adie, Miller, and Rankin, was during the last year the only one in that particular neighbourhood to which, from special circumstances (now, I believe, likely to be removed), this water supply is not brought; and, most unfortunately, it was the only locality in which the cholera broke out in that district with any violence during the last summer; there having been at Rosehall, out of a population of about 2000, 27 deaths. This unhappy circumstance was adverted to by the gentlemen above-mentioned with extreme regret, the more so as they anticipated that the abundance of water for all purposes which was to be had within a quarter of a mile of the village, would have been sufficient to prevent any such calamity arising from that source. It was also further a source of regret, because the general opinion of the neighbourhood attributed the infliction to this delay in bringing water to the people's doors. If this delay was the cause, it is satisfactory to be able to add the assurances of Messrs. Adie, Miller, and Rankin, that they were determined to cure the defect before the present summer is over, and that in April last they were carrying on negotiations for that purpose. But there is in that village another very obvious and much more exciting cause of cholera, and the deficiency in the supply of water—namely, the position, the smallness, and the crowded state of the houses. The houses are 8½ ft. high in the front, consequently at 10, 12, and 14 ft. square respectively, would afford a quantity of 800, 1200, and 1600 cubic feet of air. Besides, they are not kept properly ventilated. It is found at most of the other large works in Scotland that there is the same difficulty in preventing the overcrowding of the houses by means of lodgers, arising, perhaps, in some degree, from the large number of Irish who have of late years been introduced into the coal and iron works. Finest are resorted to keep the evil in check; but it is probable that the gain to the tenant of the house is much greater from the lodgers than the loss would be from the fine, even if it was always levied on detection. The better remedy would most clearly be a full number of houses in proportion to the extension of the works and the demand for labour; for this tendency amongst the workmen must always be expected to be strong to live near their work, even at some loss of comfort and convenience. The efforts for the general improvement of the working population, which I have frequently had occasion to notice of late years in the large centres of employment in the iron and coal districts in Scotland, continue to be conspicuous, and it is hoped, are affording evidences of their good effects."

Messrs. Winstanley submitted for sale, by auction, on Tuesday, 20 forfeited shares in the Kilbricken Silver-Lead Mine, 41. 17s. 6d. each paid; the lot

Mining Correspondence.

BRITISH MINES.

ALTARNUN CONSOLS.—On Monday, the 9th instant, I went underground with Mr. Northan, who examined the lode in the 30 ft. level, and considered it prudent to extend the level and one or two fms. further; since then we have driven about 4 ft., and the lode is improved very much; at present the lode is from 2 to 3 ft. wide, producing splendid work for tin. We shall haul a pile of stuff to-day of the first quality, and there is every reason to expect equally as good in the east end, and also in the shaft, when we get further off from the slide.—R. REYNOLDS: Oct. 19.

BALLESWIDEN UNITED.—We have set to several of the miners, and we now want 20 more men to work on the tin ground discovered. I am glad to report we have now got to the bottom of the flat-rod engine-shaft, and have cleared 2 fms. east; report says that 6 fms. east of this shaft there is a winze 5 fms. below the bottom level, with a good lode of tin, 18 in. wide. I hope to see this next week, and so clear to the 40 end east and west without loss of time, 16 fms. east of this shaft. We have a good lode of tin in the bottom of the 30, 18 in. wide; we have set a winze this day to four men, to sink on this tin, at 40s. per fm., and no tribute. The back over is worked away. We have not come to the 30 end as yet; all the ground we can see in the back of the 30 and 20 ft. levels looks well, and I expect in less than one month from this date, all being well, I shall be able to report good news from this part of the mine. At Daw's shaft, on another lode, five men in the last month have broken 300 ft. worth of tin from 3 fms. of ground. In a winze only 12 fms. below the adit, on this lode, we have now good tin ground holding down for 5 fms. long, and holding away in the east end; this looks well. On the slide lode we have now good tin ground below the 45 ft. level, 32 fms. long, and still holding away in the end. Our mines, on the whole, are looking well.—JOHN CARTWRIGHT: Oct. 14.

BEDFORD UNITED.—We are driving by the side of the lode in the 130 ft. level. There is still a fine lode in the 115 ft. level east, worth quite 10 tons of ore per fm. Paul's and Jeffery's stopes in the back of this level are just as last reported. Jackson's stopes in the 103 ft. level will turn out 4 tons, and Manuel's stopes 6 tons of ore per fm. No lode taken down in any other part of the mine.—J. PHILLIPS: Oct. 18.

BIRCH ALLEE.—Pye's shaft, going below the 40, continues in much the same kind of ground for exploring as stated last week, and there is a very promising lode in the bottom of it, about 2 feet wide, producing cubes of lead, in a pretty munda, spar, soft barytes, and black jack; this, I think, looks as if we shall discover ore here shortly. In the 40, south of Pye's, the lode is at present showing a very kindly appearance, and the back of the end is producing work which, I think, will pay for dressing, and which is evidently making over the end; the lead is disseminated in a white barytes, black jack, and spar. In the winze below this level there is a branch producing good work for lead, and it looks as if improving in depth. The pitch in the back of this level is without any material alteration. The engine, flat-rod, and other machinery on the mine, are in their usual course of working.—G. R. OUGES: Oct. 14.

BOLENOWE.—The lode in the 50 ft. level, driving east, is now 3 ft. wide. In the other levels there is no alteration since last report.—W. ROBERTS: Oct. 14.

BORINGDON CONSOLS.—In the 12 ft. level east the lode is much the same as last reported; in the same level going west there are no alterations to notice; the stopes in this level are yielding a fair quantity of work. In the 24 ft. level east we have a very promising lode indeed; we are carrying about 4 ft. of the lode, which is composed of flookan, spar, munda, and occasionally good stones of lead, with a very large stream of water issuing from the end; going west, the rise is up between 2 and 3 fms. in a good ore ground.—W. GODDARD: Oct. 19.

BRONFLOYD.—We have driven 3 fms. on the south lode; the ground is improving very much, cleaner, and with more spar, and a few spots of ore. In the cross-cut north we have met with a string of spar, which I believe to be a branch of the north lode.—J. JONES: Oct. 17.

BYNTAIL.—There is no alteration on the lode in the 12 ft. level since last report. The ground in the south level is still good for driving. The lode in the shaft, going north of the deposit of barytes, is now worth 20 ft. per fathom. If this continues, which from present appearances I have reason to expect, we shall soon lay open a good mine—price for sinking, 31. 10s. per fathom. It is necessary to observe that this shaft is sinking from surface, and is only 3 fms. deep.—J. ROACH: Oct. 19.

CALSTOCK CONSOLS.—In the north cross-cut, on the cross-course, the men are engaged in cutting down the eastern side of the level near the present end, there being a large quantity of water coming away from this place, and as the ground consists of capel, spar, ore, and munda, for several fathoms in extent; it is probable one of the lodes we are in search of will be found here. In the cross-cut to the Zion lode the ground contains a quantity of munda. In the south cross-cut the men have commenced driving on a north underlie lode, which, from its bearing, will unite with the south underlie lode to the east, at a point, we presume, where a flookan cross-course will also cross the lodes.—W. B. COLLINS.

CALSTOCK UNITED.—The whole of the work on the tin lode is stopped. There are about 100 kipples of work left underground in the 28 ft. level, from the stopes which will pay a profit on the drawing and dressing; this will be hauled and stamped by to-morrow evening, after which the engine will be idle; we have had no offers to take pitches on tribute on this lode. In the sump-shaft, on the great munda lode, the sumpmen have about 6 fms. more to sink to complete their bargain. The lode in this shaft is now 9 ft. wide, with a hard and well-defined wall on either side. On the south wall the branch, last reported as 6 in. wide, is now full 18 in. wide, composed of priam, spar, with spots and stones of ore embedded in the same; there are no regular interbeds of ore; the other part of the lode is composed of flookan and soft light blue killas. The munda pitches are all stopped, but the munda already broken must be hauled, in order to pay the tributors. The kilns are being let out to-day, and nothing further will be done in the arsenic department until further orders are received on the subject. The amount of our last parcel of tin, 311. 5s. 6d., is received to-day, and handed to the purser.—J. KERRICK: W. COOKE: Oct. 16.

CAMBORNE CONSOLS.—The ground in the 33 cross-cut north continues favourable for driving. In the other levels there is no improvement to notice since last week.

CARVANNALL.—The lode in the 96 ft. level, west of engine-shaft, is 2 feet wide, worth 121. per fm.—W. ROBERTS: Oct. 14.

CLOWANCE WOOD.—We are driving the 12 ft. level east of Richards's shaft; the lode is 1½ ft. wide, with stones of ore, munda, and jack.—E. CHURCH: Oct. 14.

CRAIGWEN.—Both lodes in No. 1 adit are the same as last reported. The ground in the shaft is hard and troublesome to sink. The masons are going on well with the ore pits and the bridge. I expect the ore dressers here every day.—H. JONES: Oct. 18.

CUBERT UNITED.—At Trebrihan, there has been no lode taken down at the engine-shaft during the past week. The lode in the 55 ft. level, west end, is split into two branches; the southern is producing some good stones of lead. The stopes in the back of the 45 west are producing 6 cwt. of lead per fathom. In driving in the 35 ft. level the lode is as last stated, small, composed of quartz and a little munda. At Trebrihan, there has been nothing done at the shaft during the past week, as we have not been able to get a pair of men qualified for the place. The lode in the 56 ft. level, in the 35 ft. level, has been greatly improved, it is 1½ ft. wide, worth from 5 to 6 cwt. per fathom; the stopes in the back of this level are not quite so rich for lead—now worth about 5 cwt. per fathom. We cannot report the sump winze this week, as the men have been engaged in making some necessary alteration in the rod stays, &c.; they will resume sinking on Monday next; the stopes in the back of this level, north and south of the sump winze, will average from 3 to 4 cwt. of lead per fathom. The lode in the 46, north end, is 7 in. wide, composed of quartz, priam, and flookan; the lode in the south end is 1 ft. wide, composed of quartz, priam, flookan, and munda, having a very healthy appearance. The two pitches, east and west of Trebrihan shaft, in the 35 ft. level, are greatly improved in the last two or three days, and from present appearances, are likely to continue good for some time.—A. DOWS; J. TREVES, CWMIDYLE.—I have no alteration to report relative to the stopes throughout the mine since my last, excepting No. 3 stopes and No. 6 level; in this stopes the lode is becoming very regular, and producing good ore. On Monday we broke the raft wheel of the crushers; we have erected a new one, and again got into working order; we have also put in a new roll and couplings, and have two pairs of crushers this side of the engine in good working order. A cargo of ore would have been sent off this week had the engine not been idle, but it will be shipped in a few days.—T. COLLIER.

DEVON AND CORNWALL UNITED.—The ground in Harewood shaft is good for sinking, and very congenial for copper; there are branches of iron pyrites and copper pyrites traversing the country just at right angles with the lode, which I find very favourable symptom. After sinking about ½ fm. more the lode will be laid open in the 40, and, judging from present indications, you may reasonably expect to find it materially improved at that point. The late discovery of new lode is opened on about 6 fms. in length, and produced 15 tons of copper ore in driving the level this short distance: the end still looks well, and promises similar results. A cross-cut is set to drive to intersect that part of the lode still standing to the south, and only seen at one point in the mine, which is a little to the east of the cross-course, in the middle level. Notwithstanding the points of interest exhibited in the eastern part of the mine, I consider the cross-course, near the western boundary, a feature of the first magnitude. I am told that this cross-course is the one at 'Devon Great Consols,' but whether it is or not, it seems the country for a considerable distance, and is associated with rich mineral deposits. The mines being developed up and down the valley, are (some of them) within its influence, and the satisfactory results arrived at are demonstrative of these remarks. The dip of it being easterly, it approaches the Harewood shaft, on its downward course, by which you will perceive the admirable position it holds in the western ground, which will ultimately become the lungs of the mine.—J. HAMPTON: Oct. 17.

DEVON BURRA BURRA.—The cross-cut to intersect the south lode has been driven about 10 feet this week, and on Tuesday another branch was intersected about 1 foot wide, carrying a leader of ore 1 inch wide, the other parts being composed of capel, spar, and priam; this branch is going nearly downright. The north lode has been driven about 9 ft., and is now 4 feet wide, producing spar, capel, munda, and spotted with copper ore. This week I have been shooting, and have cut a fine lode, which is nearly 3 fms. wide, and composed of capel, gossan, priam, and good stones of ore, similar to those found in Sortidge Consols near the surface in the gossan, and there are good rugs of yellow ore in the capels; this lode is running nearly east and west, and underlies north. By driving on the north lode west in our deepest level we should intersect this lode, and all our other lodes and branches run up against the great champion lode. I believe this lode made the ore at the Gate-post.—J. JENKINS.

DEVON AND CORNWALL.—The lode in the 90 ft. level west is much the same as last week. The lode in the 80 ft. level west is very much improved; will turn out 1½ ton of good ore per fm., and still promising a further improvement shortly. The lode in the stopes in the bottom of this level is worth 2 tons of good ore per fm. The lode in the stopes in the back of the 90 fathom level is worth 2½ tons of good ore per fathom.—T. BAXTER: Oct. 18.

DEVON UNITED.—The ground in the deep adit level north is somewhat easier for progress; we are, therefore, progressing satisfactorily towards the great copper lode, where the lode is 8 fathoms per month. We have now a good supply of surface water, which we are taking every advantage of in getting out the underground water, and I think there is no doubt but what we shall have sufficient surface water for some months to come, or, at least, to prove the lode in the 62, under the great mass of munda, which is looked forward to with very great interest.—A. BRAY: Oct. 18.

DUKE OF CORNWALL.—The above mine continues to improve. In the 70 east we have a very kindly lode, about 2½ ft. wide, producing some good stones of ore; in the 70 west we are driving by the side of the lode. In the 50 east we have an ore lode, 3 feet wide, opening good



The lode is about 2½ ft. wide, composed principally of hard spar and gossan, and some stones of ore, but no tin. In consequence of the stopping of Old Treasury, and the water running back in West Treasury, the adventurers have suspended it also; you must, therefore, give up all hopes of doing any good in Lambro for the present, except we put in an engine on the south lodes, when we cut a good bunch of ore in the counter, or 50 fm. level.—W. THOMAS: Oct. 18.

GOLD COMPANIES.—The continuation of Mr. H. E. Mielke's series of papers, showing how operations could be conducted to a successful issue, will appear in our next Journal.

"T. S. D." (Broad-street).—There has never yet been a meeting called of the Ave Maria Gold Mining Company. The directors have invariably refused to afford the shareholders any satisfactory information. The agent has arrived in London from California, and may be met with at Mr. Ford's, No. 4, Liverpool Place. He will, he will, no doubt, be enabled to give some account of the present position and future prospects of the company.

We have particularly to request that subscribers and others, in paying accounts, will send cheques or post-office orders, in preference to postage-stamps.

LONDON, OCTOBER 21, 1854.

We have thus referred to our past career in no idle spirit of vanity; but the assistance which, we flatter ourselves, we have hitherto afforded to the successful progress of practical and scientific mining, is the best earnest of the future, and the public may rest assured that our strenuous efforts shall be zealously and assiduously exerted to uphold the position which we have laboriously but honourably attained.

A communication was read, in the Geological Section, by Dr. WHITTY, Trafalgar-square, London, on the presence of coal recently discovered in the county of Cavan, in Ireland, under rather novel geological circumstances. A large bed of anthracite, 4 feet thick, had been unexpectedly met with by Dr. WHITTY, on a property in that county which he had been appointed to examine. The district was described by him as being of the grauwacke or Silurian rock formation—a formation in which the appearance of coal measures has been hitherto an anomaly almost unknown to geologists, with the exception of that described by Professor HARKNESS as existing in Scotland. From the inclination, a speculative conjecture was hazarded that the seam in question might be a continuation of the Scotch coal bed, and that it would be found continued through the counties of Down, Armagh, and Monaghan. A specimen of the coal, on analysis, presented the following constituents:—Carbon, 77·64; water, 4·35; Ash, 18·01: total, 100. It was found not to contain any bitumen, but a large proportion of carbon, and may, therefore, be good fuel for furnaces, engines, &c. It had been met with in the lowest and most contorted of all the stratified rocks, but it probably appears at the surface in other localities. Modes of working it were suggested. The paper gave rise to some discussion, and the opinion seemed to be generally entertained that it was a continuation of the Scotch coal field. Since this important discovery was made, several tons of the coal have been raised, and sold in the neighbouring towns, and it is likely to prove of great value in a district where great difficulty has hitherto existed in procuring fuel for the burning of lime for agricultural purposes, so very requisite in slate countries.

A paper was read by Mr. HOPKINS, giving the result of experiments, "On the Effect of Pressure on the Temperature of Fusion of different Subjects." At the commencement of his researches, Mr. HOPKINS appears to have enlisted the zealous co-operation of Mr. WM. FAIRBAIN, who assisted him to the utmost extent by the facilities which his great

establishment afforded. A short description was given of the apparatus which had been used, and of the successive steps by which failures in some contrivances had led him to that which had been ultimately found to answer. From the enormous pressures to which substances were subjected, it had been for a long time found impossible to use glass in order to see what was going on within the cylinders, in which the substance subjected to experiment was enclosed. This difficulty was at length removed by causing an iron ball to rest on the top of the substance within the cylinder, while its presence deflected a small magnetic needle outside, but, the instant the melting of the substance inside permitted the ball to fall, the magnetic needle, returning to its position of rest, indicated the fact. The use of this needle rendered it necessary to make the cylinder of brass; and what is very singular was, that when enormous pressure was laid on the first cylinder which had been tried, the quantity of liquid within diminished. They long sought in vain to discover the cause, but at length it was found that it had wasted by escaping through the very pores of the metal in thousands upon thousands of jets, so minute as to be almost imperceptible. This they at length remedied by greater care in the casting of the cylinder; and by hammering it well on the outside. The method of laying on the pressure was by a piston, well packed and forced down by a lever, which was adopted as the simplest means of getting a numerical estimate of the actual compressing force. The method by which the friction which opposed the motion of the piston, diminishing the pressure so much, had been determined, was by noting the weight required to drive the piston in a certain small distance: this, less the friction, was equal to the compressing force. The weight which allowed the piston to return exactly to its first position was then noted, and this, together with the friction, was equal to the compressing force. As these two compressing forces were equal, the friction was equal to half the difference of the two weights used, and was then a matter of very simple calculation. The results of the experiments were given, and the following are amongst the most curious:—

Substances experimented on.	Pressure in pounds to the square inch.		Temperature Fahrenheit at which it liquified.	
Spermaceti.....	0	7790	134°	140° 176° 5
Wax.....	0	7790	125°	168° 5 176° 5
Sulphur.....	0	7790	228°	273° 5 285
Stearine.....	0	7790	153°	155 163

When the weight 0 was on the piston, the substance was under atmospheric pressure, or about 15 lbs. to the square inch, and the pressure of 7790 lbs. per square inch was that at which the Britannia Bridge had been raised. The metallic alloys which fuse at low temperatures were also tried, but any elevation of fusing temperature acquired by increased pressure had not been detected, and it was properly stated that these experiments required to be repeated and confirmed before they could be relied on.

Mr. FAIRBAIN then read another paper, "On the Density of various Bodies when subjected to enormous Compressing Forces." Amongst various facts of great interest, which were accompanied and illustrated by tables, he stated that, besides the enormous pressure used by Mr. HOPKINS, of 7790 and 11,880 lbs. on the square inch, he had applied pressures of 80,000 lbs. and 90,000 lbs. to the square inch, or what would be equivalent to the weight of a column of water over 33 miles in height. Under this enormous pressure, clay and other substances had acquired all the density, consistence, and hardness of some of our hardest and densest rocks.

Many of the material parts of a most valuable paper, "On the Consumption of Fuel, and the Prevention of Smoke," read by Mr. FAIRBAIRN, before the Section of Mechanical Science, had been already anticipated in the columns of this Journal, when directing attention to the report of that very eminent engineer to the local judicial authorities of Glasgow, on the means of relieving that city from the smoke nuisance. He, however, described a furnace, which he conceived offered great facilities to the more perfect combustion of fuel. It was formed of two furnaces united into one, and the proposed improvement consists in a plan by which the gases issuing from the coals become mixed in a single chamber, and are then passed, in a heated state, over the bridge of the furnace, where they are ignited. By this arrangement, combined with care in keeping the fire-bars clear for the admission of air, the combustion was rendered very complete. This paper produced an important discussion, in the course of which Dr. ARNOT referred to his improved stoves, and explained the principle on which the combustion of fuel was effected in them. A plan originally suggested by Dr. FRANKLIN, had been adopted by him, that of inverting a fire-grate, after the ignition of coals, and by this means placing the coals at the bottom and the fire at the top. He explained, that the smoke of bituminous coal was in the nature of evaporated pitch. By the proposed process it is submitted to the action of heat; and the smoke ascending through the hot coals at the top, is completely consumed, being converted into carbonic acid gas and water. It had been estimated that, according to the old plan of a large open fire-grate, five-sixths of the heat of a common fire passed up the chimney. Another curious result was pointed out—namely, that the throats of a chimney may be so contracted as to render the draught sufficiently strong to permit an opening to be made into the chimney from the upper part of a room, without the risk of its smoking, thus securing a more perfect ventilation than can be obtained in any other way. Mr. WILLIAMS's method of consuming smoke by the admission of jets of fresh air at the bridge of the furnace, and Mr. JUKES's moveable bars, were both referred to in terms of approbation during the discussion.

Mr. GRANTHAM, of Liverpool, read a paper on his admirable project of a high level railway from docks, communicating directly with the several warehouses, and also with the termini of the railways in that town. We derive great satisfaction from the consciousness that our columns were, we believe, the first medium of early introducing to public notice this proposed improvement, which, when completed, will form in itself an incidental era in the progress of railway enterprise.

A paper, from the pen of Mr. J. NASMYTH, "On a Method of Boring Holes in Rock for Tunnelling Purposes," attracted notice, as well from the importance of the subject as from the high repute of the author. It is well known, that in the ordinary method of boring holes for blasting by striking the end of the iron bar, or rod, with heavy hammers, much of the effect is lost, the power being in a great degree counteracted by what is termed the *vis inertia* of the bar. Mr. NASMYTH proposes to overcome this defect by converting the bar into a piston-rod, working in an air-tight cylinder, through a stuffing-box. By the adoption of this plan, it is conceived that increased force will be acquired; for when the piston is drawn to the end of the cylinder, the pressure of the atmosphere will force it back with necessarily accumulated weight, and the blow will be given with greatly increased effect. It was suggested that a similar result might be produced, even more readily, by the employment of vulcanised india-rubber springs; and Mr. NASMYTH observed, that any very elastic medium may be made to answer the purpose, but air suggested itself, as affording greater extent of spring. Mechanical contrivances might easily be introduced, adapted to change of shape and direction of the vibrating point.

Mr. GRANTHAM read a paper on Mr. LINDSEY's experiments on a marine telegraph, as recently tried in Portsmouth Harbour, the object of which was to transmit a current of the electric fluid through water, without the use of immediately connecting wires. This subject was alluded to in our last Journal, in reference to statements which have recently appeared in the *Mechanic's Magazine*, of a very conflicting nature as to the result of experiments on that subject conducted by Mr. BAILEY across the Serpentine. Similar experiments had been tried in America, and elsewhere, in which electric currents had been transmitted across rivers by extending wires along the banks, at each side, and immersing copper-plates at each side. By this means, when a thin wire of sufficient length is able to overcome the opposition offered to the electric fluid by the water, a large portion of electricity will be found to pass directly through the water, instead of taking the more extended course through the wire. The experiments in Portsmouth Harbour proved more satisfactory than those across rivers, salt water being found a better conducting medium than fresh; but as yet no satisfactory results appear to have been attained; and although the subject presents a curious electrical problem, we confess we can hardly anticipate any success on which reliance can be placed.

Mr. BAKEWELL then read a paper on Telegraphic Communication between Great Britain and America; an object, of course, of transcendent importance, but the importance of which is equalled by the extreme difficulties it presents. The plan proposed was the employment of a single galvanised iron wire, sufficiently strong to be self-protective, insulated with gutta serena, or other non-conducting substance, covered with tarred hempen yarn. It is conceived that such a wire might, from its comparative lightness and flexibility, be readily stretched across the Atlantic, at a cost of 100,000*l*. A single wire would, in the first instance, be sufficient for the purposes of telegraphic communication. The

difficulties which were originally found of transmitting electric signals through insulated wires immersed in water were referred to, and the success by which they had been overcome seemed to promise that the impediments to transatlantic communication might, perhaps, be also subdued. In this presenting, in a condensed form to our readers, the results of a variety of very interesting communications, we merely fulfil our public duty, as watchful chroniclers of the times, and are not, of course, answerable either for the speculative opinions they present, or for their probable or possible success. The spirit of enquiry is abroad! The British Association may be considered the circle of intellectual light; and the opinions and discussions emanating from its meetings, and diffused by the press, as the rays by which science disseminates its discoveries, reveals the secrets of nature, and illustrates the improvements and progress of art.

A case of some importance with regard to contracts entered into with railway companies was decided in the House of Lords, during the last session of Parliament, and it presents this novelty—that at the time when Chancery proceedings are far less protracted than they formerly were, an appeal from a decree of the late VICE-CHANCELLOR of England, dated the 13th of July, 1844, was not disposed of until nearly ten years after it had been pronounced. The case to which we allude was that of *RANGER, appellant, v. the GREAT WESTERN RAILWAY COMPANY, respondents*; and it involved a number of novel and important matters for consideration. It is difficult to present in a condensed form all the facts and circumstances of a case which occupied nearly six days in the arguments, and an entire one in the delivery of the judgments; but, stripping it of its legal and immaterial particulars, we have endeavoured to bring the real questions, and the points decided, concisely, but at the same time clearly, before our readers. That company was incorporated in 1835; and when they commenced the line of railway, they divided it into two portions, that from Bristol to near Reading being the *B*, or Bristol division—that from Reading to London being the *L*, or London part. The appellant was a railway contractor, who had entered into three several contracts with the company in 1836, the 1 *B* contract being for 2½ miles from the Bristol docks; the 2 *B* contract for about two miles, beginning at Keynsham; and the last, a *L* contract, beginning at the Caversham Road, near Reading, for a portion of nearly six miles. The appellant, after the execution of his three several contracts, entered upon the execution of the works, received large sums of money on account, and was proceeding with them, when, on the 2d of July, 1838, the respondents took possession of the works comprised in the two *B* contracts, and seized all the plant, tools, and materials, alleging that the contractor had made default, and that they had, by the express stipulations of the several contracts, a right to seize the whole as forfeited.

The appellant, on the 21st of July, 1838, filed a bill, by which, as afterwards amended, it appeared that during the progress of the works the company, in addition to sums paid on account, had also advanced £8,000, on a mortgage of the plant and materials; and it alleged—first, that the appellant must be considered to have been led fraudulently into the signing of the contracts; secondly, that, at all events, the respondents had by their conduct in taking possession, put an end to the contracts, and that he was entitled to be paid for what he had done, irrespective of the stipulations contained in them, as on a *quantum meruit*; and thirdly, that at the time the mortgages were entered into the respondents were really, if the accounts were fairly taken, indebted to the appellant on account of the works he had actually executed. The bill, after insisting that the appellant was entitled to be paid interest on the sums so due, prayed a general account of what was due to the appellant, at fair prices, for the works he had executed, disregarding the contracts, and charging the respondents with interest on all sums due to him at the dates of the mortgages, and also charging them with the value of the plant and materials of which they had taken possession.

The frauds imputed to the company appeared to be twofold—first, that the price at which the appellant had taken the contracts was much less than it would have required if he had known the nature of the stone at the Bristol end; and secondly, that he was deceived intentionally by the trial pits which had been sunk. It appeared that there are three kinds of stone in the neighbourhood of Bristol—namely, sandstone, soft, and Durns or Dunns stone, and Pennant or Hannam stone, both hard materials; and the appellant alleged that the company, through their engineer, Mr. BURNELL, had induced him to believe that the cuttings would be entirely through the former, while they proved to be in a great measure through the latter. He also complained that the trial pits which the company had sunk, were intentionally too shallow to enable him to form a correct judgment of the true stratification of the ground, through which the cuttings were to be made.

The company principally relied upon the contracts, which were very elaborate deeds, under seal, and executed both by the appellant and the respondents. By those deeds the appellant had contracted to execute the works on the specified parts of the railway, according to the specifications, within fixed periods; and they provided that the appellant should secure their due performance by his bond, conditioned for payment to the company of certain sums for every week's delay in the completion of the works, such sums increasing in certain proportions, according to the length of time. It was further provided, that if the appellant should become insolvent, or from any cause whatever, not the act of the company, should not proceed with the works to their satisfaction, they might serve him with a notice, and, after seven days' default, might employ workmen of their own, paying them out of the moneys in hand belonging to the contractor; that the moneys previously paid to him might, in that event, be deemed full payment and satisfaction for all works already done by him; and, further, that all moneys then or thereafter becoming payable to him, together with the tools and materials, should become the absolute property of the company, and that, if such tools and materials should not be sufficient to pay for the completion of the works, he should make good the deficiency. The deed further declared that the company had agreed to pay the contractor the sum of £8,028, 18s. for the completion of the works, in the following manner—namely, to pay every fortnight four-fifths of the value of the works done during that period, until the reserve fund on each contract should amount to 4000*l*., and then to pay the full value, to be estimated on certificates of their principal engineer, who was, in his calculation, to have reference to the prices in the schedule as to extra works, as well as to the entire costs of the works; and one month after the completion of the entire works to pay one moiety of the 4000*l*., and the remaining moiety at the end of a year and a month. It was by the deeds further agreed, that the decision of the principal engineer, during the progress of the works, should be final; but, after the completion thereof, that any difference should be settled by arbitrators, the engineer to be the arbitrator of the company. The respondents insisted that the appellant having violated his contracts, they were entitled to set aside the deeds, and to have the completion of the works done by them, as they had done, in pursuance of the strict stipulations contained in the deeds. The company relied on the certificates of their chief engineer, Mr. BURNELL, as conclusive; while the appellant insisted that they were illegal and void, he having been a shareholder in the company at the time he signed them.

By the decree of the late VICE-CHANCELLOR of England, appealed from, he had held the contracts binding. He had affirmed the certificates of the chief engineer, and directed certain accounts of the works done by the appellant, with liberty to him to inspect and survey the road, and subject thereto that the rest of his bill should stand dismissed, with costs. The appellant now complained of only part of that decree; while the company complained of it also, insisting that no accounts whatever ought to have been directed, and that the bill ought to have been dismissed with costs. The House of Lords conceived that the appellant had failed in establishing the charge of fraud against the company—being of opinion that ample opportunity had been afforded, and availed of by him, of judging of the strata; that he had also failed so far as the charges against Mr. BURNELL were concerned, for by the express contracts of the appellants, the company were made the judges; and there was, therefore, no valid objection to their engineer acting as their agent, although he had shares in the company. The bill must, therefore, be dismissed, so far as it endeavoured to sustain those allegations, and also so far as it alleged that the appellant's signature had been obtained by fraud, so far as it sought a declaration that he had not incurred any penalties, as also so far as it sought a declaration that the defendants were not entitled to take possession of the works, and that by their doing so they had relieved the appellant from all obligations in respect of the contracts, and treated them as abandoned. Although the appellant was not entitled to all the relief sought, he was entitled in the opinion of the House to some, and the decree of the Court below must be varied accordingly. The three several reserved sums of 4000*l*., each, making 12,000*l*., had been amongst the property seized and forfeited by the company; for these they were bound to

account. The value of the plant could not be less than 10,000*l*., and the true meaning of the contract was that the company, although at liberty to seize and appropriate the plant belonging to the appellant, were also bound to account for its value in settling their accounts with him.

The House then declared the appellant entitled to a decree to the following effect:—1st. An account of all sums properly expended by the company in completing, according to the terms and stipulations of the contract, the works thereby respectively agreed to be done by the appellant, including extra work.—2d. That an account should be taken of what is due to the company for principal and interest on the several advances made by them by way of mortgage; and that it ought to be declared that the appellant is properly chargeable on that account for all sums expended by the company in the completion of their works.—3d. The appellant was then declared entitled to an account of what would have been payable to him under the contracts at the completion thereof, in case the works had been finished by him, and not by the company; and also to an account of the reserved funds, and of the value of the plant and materials, which the company took possession of in the months of July and August, 1838. It was further declared that the appellant was chargeable in those accounts with all penalties, and other sums, payable under the conditions of his bonds—such sums to be treated as liquidated damages, unless the appellant could show to the satisfaction of the Court that the default, or delay, in respect of which the damages were claimed, were occasioned by the act or default of the company, their agents, or servants; and no penalties, or sums, were to be claimable on the bonds from and after the time that the company took possession of the works respectively, to which such works referred. The House disapproved of the filing of separate bills; and as the appellant submitted to pay such sum, if any, as should be found due from him; after the accounts had been fairly taken, full justice might be done to both parties by the decree as varied, which also contained a variety of other incidental directions. The House, however, declared that they had no jurisdiction to enable the plaintiff to recover the value of his work in the nature of a *quantum meruit*—that that was a remedy at law, which was open to him, if he wished to assert it, over which a court of equity had no control. As the decree of the VICE-CHANCELLOR had been substantially varied, and as the case was sent back to the Court of Chancery for further enquiry, the House directed that there should not be at either side any costs of the appeal; but that both parties should severally abide their own.

Although many of the causes that have changed the depression of the iron trade, in 1850, to the healthy and remunerative condition of the last three years still exist, we consider it would be most unwise and imprudent if the opportunity which will present itself next spring (the opening of the Universal Exhibition at Paris) should find our metallic industries lethargic and unconcerned, taking no heed or trouble to promote the most intimate freedom of trade in coals and iron with our allies and neighbours of France. The "Iron Manufacture" of Great Britain we hope will, therefore, gladly respond to the invitation, and, encouraged by the facilities of transit afforded, and the great advantage of affixing prices, make the most earnest endeavour to show every variety of quality, form, and mode of manipulation that prevails in this country. To the French free-trader this will afford the greatest information and confidence, and the French protectionist will learn how greatly his fears of injury are exaggerated. At what a sacrifice to every other industry a country prohibits the importation and free use of iron, it is unnecessary for us to argue. Free exchange of productions is now, amongst political economists, if not among manufacturers, a settled fact; and no one can deny but that a reduction, or rather annihilation, of the heavy and prohibitory duties in France would be the greatest boon to both countries that could be imagined, even by the wise and fertile brain of the present popular EMPEROR OF THE FRENCH. We should be misleading our iron-trade readers if we allowed them to suppose that the benefits of production and consumption would not be mutual. We should send to France raw material, which they want: we should receive from them ornamental and finished castings, which we want. Who, conversant with the trade, but knows the difficulty to get, in this kingdom, anything approaching to a tasteful column, fountain, or railing, but at an enormous cost. If the French had pig-iron as cheap, they would run away with a large share of our and the world's custom, of such articles; and seeing that we make about 2,750,000 tons of pigs, and they the odd 750,000 only, we should enable them to ornament us.

The gentlemen selected by our Board of Trade to assist in forming a collection illustrating the iron manufacture of these kingdoms, Mr. W. BIRD, Mr. S. H. BLACKWELL, and Mr. J. S. ROBINSON, we trust, will be thoroughly supported by the manufacturers. The different localities of the iron trade in this kingdom, and their several characteristics, are not too well known, even to manufacturers themselves; and a collection which, while forming one great whole, will exemplify the specialties of each district, or seat of the trade, must be of great interest, and a large amount of valuable information to our own, as well as French consumers, must be the result. All we ask of the makers is—*Let the collection be worthy of the trade.*

An adjourned meeting of shareholders in the *CARBERRY WEST MINING COMPANY*, whether scripholders or registered proprietors, was held on Wednesday, for the purpose of appointing a committee of investigation into the affairs of this company. The manner the proceedings were conducted (which are fully reported in another column) will be hailed with satisfaction by the various parties interested. There can be little doubt but that the adventure has been carried on in a most loose manner, and those who have been the means of bringing it into its present condition are now doing everything in their power to keep the mine in disrepute, although any information derived from discharged captains and such like characters, will always be looked upon with suspicion. Mr. LUCAS has, from time to time, published in our columns various statements of accounts, which were correctly abstracted from the books, but, as he observed, he made no comments, and it could not be expected that he could attach a long explanation to every item. Mr. LUCAS, no doubt, sunk his money in the concern purely as an investment, and not as a jobber in mines, and as such it was natural he should keenly feel the manner the proceedings had been conducted, but he appears, to a great extent, to have lost sight of the fact that all the misdoings, if there have been any, were done by the parties before the present board came into office, and the conduct of Mr. PETER, the present chairman, throughout has shown only one desire, that of resuscitating the mines. He and his brother director have invested largely in the concern, and have evinced the greatest anxiety to develop the property, and, by the step he is about to take, it is to be hoped his best wishes will be realised.

Various propositions were made for raising capital, and amongst others the issue of the 13,545 reserved shares, but in the present state of the market, it was truly observed that that plan was quite impracticable. In this dilemma their chairman came to their assistance, and to the satisfaction of all present, announced that he was in negotiation with one or two capitalists, from whom he expected to obtain at once an ample sum to purchase the necessary machinery, and effectually develop the mines, provided that liberal terms were conceded, remarking that he was not the only one who had confidence, notwithstanding the reports that were, from time to time, circulated against them. Advocating, as we do at all times, "legitimate mining in Ireland," we trust the parties, who have certainly acted honestly in the matter, will not be disappointed, and that not only the shareholders in the *Carberry West Mining Company* may yet be remunerated, but, as Mr. LUCAS observed, that the day might arrive when they would be in a position to offer something more substantial than a vote of thanks to their excellent chairman.

THE NEW MOTIVE-POWER—POULSON'S PENDULUM T LEVER.—The documents filed in the Great Seal Patent Office by Mr. Ebenezer Poulson, of Monkwearmouth, in the county of Durham, in the matter of the letters patent for his invention for giving motion to mechanical arrangements where manual force is employed as a prime mover, under the title of "An Improved Mechanical Purchase, applicable to working ships' and other pumps, and to similar purposes," set forth the nature of the said invention in the following terms:—"This invention consists in a peculiar adaptation of lever for working ship and other pumps, and may be employed as a mechanical purchase, when required. The lever is T shaped, and is suspended between fixed bearings on standards, at the point where the horizontal line crosses the vertical line, a heavy weight being fixed to the lower extremity of the vertical shank. In working pumps by this arrangement the rods of the plungers are fitted to the two extremities of the horizontal portion of the lever. By swinging, or oscillating, the weighted portion of the lever, the horizontal portion will receive a vibratory movement, similar to that of an ordinary steam-engine beam. The amount of purchased will, of course, be regulated by the different ratios in the lengths of the vertical arm and the horizontal one; the vertical arm being long the purchase will be increased." Drawings are annexed to the final specification, and described therein, and should be referred to for the proper understanding of the invention.

PROPOSED GREAT CENTRAL RAILWAY, THROUGH THE NORTHERN MINERAL DISTRICTS.

An outline of the route of this important enterprise appeared in our last Number, and we now proceed to point out a few of the numerous advantages which its construction would confer on general, on mining, and on local interests.

The main line, of about 100 miles in length, with average works, no tunnels, and superior gradients, is well chosen, as starting from the converging point of numerous railways, at the fashionable and rising watering-place of Harrogate, to the converging point of the Scottish trunk railways at the far-famed matrimonial shrine of Gretna Green.

By a glance at Bradshaw's railway map, it is seen that railways from London, Boston, Great Grimsby, Hull, Scarborough, Whitby, and Stockton, are more or less directly connected with Harrogate, besides lines from the inland cities and towns of Manchester, Birmingham, Sheffield, Nottingham, Huddersfield, Halifax, Bradford, Leeds, and York. Gretna Green is also directly connected with Edinburgh, Glasgow, Stirling, Perth, Dundee, Aberdeen, and Scotland generally, with the expected early completion of a line from Dumfries to Port Patrick, where the sea is only 21½ miles in width, to Ireland. From London to Gretna would be about 300 miles, or 7½ hours, at 40 miles per hour for expresses.

It is also contemplated, by the promoters of the Great Central Railway, to seek power to renew so much of the Liverpool, Manchester, and Newcastle Railway (which was ruined by internal dissension, probably caused by the pressure of opponents), as would give nearly direct access between Liverpool and Newcastle, through the heart of Lancashire and Yorkshire, by existing lines. This line was to have effected the following saving of distances:—From Newcastle to Preston, 54½ miles; to Fleetwood, 64½; to Bury, 38; to Liverpool, 25; and to Manchester, 18½ miles. Besides this important saving of distance, the Cleveland iron fields have since risen into great importance, extending from Stockton on the north, to Scarborough on the south, and then passing inland to Northamptonshire, when they appear again at Higham Ferrers in abundance.

By the Great Central Railway effecting a junction with the Bedale and Leyburn line, it would only be about 30 miles to the northern extremity of this iron field at Stockton, or Middlesborough, by the (late) Leeds Northern line; and from Whitby and Scarborough, access is had by York to the more southern coast portion of the Cleveland ores. These ores being of a second-rate quality, are largely used for mixing with other ores; and the rich hematite ores of Cumberland are in great request, for the purpose of imparting strength to the Cleveland iron. Back Barrow iron was long celebrated in Cumberland for its superior quality, before the iron ores of Furness attracted general notice; but only about 3000 tons of Furness iron ore found its way to Yorkshire in 1851.

It has, therefore, become an object of importance to seek by railway to connect these valuable iron fields, that the ores might be accessible, the one to the other, as required. The shortest route to do this would be by the valley of the Ure, Sedburgh, Lowgill, on the Lancaster and Carlisle Railway, Kendal, and the Lake district, to Furness. To carry out this view, it is proposed to have a branch from the Great Central to the Lancaster and Carlisle, at Lowgill, leaving the rest to that company beyond Lowgill. So much for the southern terminal resources of the proposed Great Central Railway, which, it will be seen, are good, and yet without competition with existing lines.

In its progress northwards, the Great Central Railway passes up the mineral valley of the Ure, through Westmoreland and Cumberland, to a junction with the Newcastle and Carlisle line, by which access is had with Carlisle, and the Furness and Whitehaven Railways, by Maryport to Carlisle. If a railway by the Lake district to Furness is not made, the Cleveland ores, and the Furness and Whitehaven ores, would be connected by the Great Central and existing railways, whilst giving great national advantages to Lancashire, Yorkshire, Westmoreland, and Cumberland. From the junction with the Newcastle and Carlisle line, near Corby Castle, or Fenton, the Great Central proceeds by Longtown to Gretna Green, chiefly through the estates of Sir James Graham, who is known to be favourable to a railway through that district, as conducing to its best interests.

From near Longtown, the Great Central proceeds past Netherby, Canoby coal field, Harelaw Lime-works, Newcastleton, Dimlabbyr Colliery, Lariston Lime-works, of superior quality, to the summit at the heads of the Liddell and North Tyne. From this summit it passes down past Stob's Castle, to the North British Railway at Hawick, where lines again converge from Edinburgh and from Berwick by the fertile and manufacturing valleys of the Tweed, the Teviot, and the Gala. Thus, at each junction with existing lines, the Great Central would exchange traffic with them in a mutually beneficial manner.

At the highest point of the Great Central lies the North Tyne Plaskett coal field, of 20 square miles area; and about 10 miles from that field are the inexhaustible iron fields of Hareshaw and Redesdale, producing about 9680 tons of very superior ironstone nodules per acre, brought to the surface at a cost of 7*d*. per ton when worked.

Amongst the numerous irons tried by Mr. Stephenson, to ascertain the best for the High-level Bridge at Newcastle, the North Tyne Redesdale iron was one of the very best, although made by the inferior coals found beside the ironstone, and formed one of the irons chosen for making the castings of that bridge.

It is the opinion of experienced ironmasters that, if made with the Plaskett superior coals, and the Larriston excellent smelting lime, both on the route to Carlisle, the North Tyne iron would be second to none, not even excepting the Lowmoor and Bowling irons, of well-known celebrity.

The Plaskett coals are estimated at only 3*s*. 6*d*. per ton at the surface, and would undoubtedly command an extensive sale in Teviotdale, where the outcroppings of this field used to be carried in sacks, on the backs of ponies, a few years back, and brought high prices there.

The celebrated hematite ores of Furness and Whitehaven, raised to the extent of 282,000 tons in 1851, will have railway and sea communication to Carlisle and other ports of the Solway, in connection with the Great Central. The North Tyne ores would, therefore, by the Great Central, be about 48 miles altogether from the mines to Carlisle, and only a few miles more to Annan, where they could be shipped to Whitehaven, Wales, or the Forest of Dean; or the ores of these districts taken to North Tyne, as might be required.

Thus, at the summit of the line, the unusual advantage of receiving an extensive mineral traffic, and conveying it down descending inclines to markets, both north and west, is realised, and is a seldom met with on any railway, which will contribute to good dividends.

The mining and iron-making population of North Tyne would have the advantage in time of the Roxburghshire markets and manufactures at a short distance; whilst these goods would be paid for in coals, lime, and iron, from North Tyne.

Exclusive of these advantages to the mining interests of the north and west of England, the Great Central Railway would shorten the present railway distance from Hawick to Carlisle and Liverpool, 110 miles; to Hexham and Newcastle, 60 miles; to Manchester and London, 110 miles.

All this would be realised without direct competition with existing lines, since a glance at any railway map will show that the Great Central only steps in to fill the vacant seat in the family circle, and would liberally contribute to the prosperity of that circle.

Such are a few of the advantages which the construction of the Great Central Railway would confer, on general, on railway, on mining, and on local interests.

It is stated that the most encouraging support has already been received, besides very general interest taken in promoting it by various local interests. It is also stated that the North-Eastern and the Lancaster and Carlisle Companies intend to support strongly the Barnard-Castle transverse line, described in our last Journal, as a basis of opposition to the Great Central Railway.

The Northern Counties line, by Barnard-Castle, over Stainmoor, had long gradients of 1 in 75, with upwards of 7000 yards of tunnelling; so that, if the line now proposed has no tunnels, either the former twice-levelled and amended line was very badly laid out indeed, or the present one has very severe gradients. Such a line, at best, is little calculated to compare with one having no tunnels, and no gradients worse than 1 in 100 between Harrogate and Brough, and Gretna. Even if made, the Barnard-Castle line should clearly be made to join the Great Central near Brough, and save half its length to the Lancaster and Carlisle, whilst giving the Stockton and Durham district more independent and direct access to Scotland, to Ireland, and to North Tyne, than they can have by the Lancaster and Carlisle Railway. Again, the connection of the Durham districts directly with Lancashire by the Great Central is of much value to that district; so that, in every point of view, the Great Central is far

Notices to Correspondents.

SIMPSON AND KENSLEY'S SMOKER CONSUMER.—Sir: Will the author of the communication on this furnace, in your last Journal, favour me with an explanation, wherein it differs from the defuncting bridge, very long since patented by Rodda? So far as I understand the description, the two patents seem identical. Some further information will, therefore, oblige.—*As Isquierre, Oct. 16.*

GOLF IN LONGWALL WORKING.—Sir: I think it is proved that there is a golf, or partially collapsed space, in longwall workings; that in a fiery colliery gas does accumulate there, and when Mr. D. Landale said "It cannot hold a particle of gas," he made a statement which he cannot substantiate. I do not know who "Newcastle Scotchman" is; for aught I know he may be the sweet singer who chaunted the praises of "Dawit" to the tune of "The King of the Cannibal Islands," or he may be the veritable "Dawit" himself; but, if he favours me with his address, I will be sure to call on him the first time I am north.—*D., Newcastle, Oct. 18.*

GOLD MINING.—Sir: It is very evident that the numerous attempts lately made to extract gold by new methods, and the various papers which have been written on the subject of gold formation, &c., by those who have had but little experience on the subject, have created an impression that gold mining and extracting is but "little understood." It is true that many of those who have been attempting to improve the process, or who have written on the richness of gold quartz veins, could not have known much about the matter, neither do the mining jobbers wish that the public should be reminded of the past gold speculations; still, the value of quartz veins were, and are, well known, and the process of extracting the gold from them the easiest of any. I do not wish to depreciate Mr. Arthur's quartz vein; my object is simply to inform him that there is no difficulty whatever in extracting gold from quartz; indeed, nothing can be easier. The real difficulty hitherto has been to find quartz rich enough to pay for working; there is not one on record.—*EVAN HOPKINS: Thurlow-square, Oct. 17.*

BARREL AMALGAMATION.—Sir: I beg to acquaint Mr. R. Jenkins that I erected the amalgamation works at Santa Ana, and attended to them personally from 1837 to 1842, and with great exertion underground and on the surface, attending to all the departments myself, from the extraction of the ore to the refining of the silver. I brought that establishment from a miserable, looting, and rickety state, to pay its costs, or, at all events, to produce 4000 ozs. of silver at the local cost of \$3200. I left it in a complete working order, and the cost then of the reducing process was only \$21 per ton. Mr. Jenkins evidently is not acquainted with the changes made by public companies; these changes, from amalgamation to smelting, and vice versa, regardless of costs or consequences to the real welfare of an establishment, have a singular influence at the meeting of shareholders, which is of much more importance than the reputation of agents, or the economy and regularity in carrying on the workings of an establishment.—*EVAN HOPKINS: Thurlow-square, Oct. 17.*

THE PORT PHILLIP COMPANY.—Sir: The meagre amount of information extracted from the despatches received at this company's office, and sent to the public papers for the benefit, it is presumed, of the country shareholders, is really an insult to them; they are told, to be sure, of two most important facts—viz, that the company's manager had communicated with the private secretary of the new governor, and that the Government Assay Office was about to be given up. But not a word is said about the financial position of the company in Australia, or how Messrs. Bland and Powles are at present employing the company's capital out there. It seems, too, from a letter inserted in your Notices to Correspondents last week, and signed "A Port Phillip Shareholder," that Messrs. Bland and Powles are in the receipt of handsome salaries, and are also relatives of Mr. John Diston Powles, who is now so well known as a director of mining companies. Here, then, are unkenneled a couple more of the family Hannibals, provided for and thus nobly offered up by him on the altar of his directorial duties. But despite all this, if the Port Phillip shareholders wish ultimately to avoid the sad fate that has befallen the shareholders of the Anglo-Mexican Mining Association, of the Columbian Mining Association, of the old New Granada Company of 1834, of the Zacatecas Company, and of the Minas Geras Company, they must, without much further delay, appoint a committee of investigation, thoroughly overhauling the state of their financial affairs, and compel the production of vouchers for every shilling of expenditure.—*CHRISTOPHER RICHARDSON, of Lincoln's-Inn: Charles-street, Oct. 18.*

"Cyclops" (Truro).—We have received a lengthened communication from our correspondent, warning the public to be cautious in investing their capital in mining bubbles at home, and suggests a careful perusal of Evan Hopkins's analysis of 300 mines in Devon and Cornwall, which appeared in the *Mining Journal* of the 30th September. "Cyclops" also advises parties before they invest their money to ascertain whether the directors, managers, pursers, and secretaries, are men of tried integrity and honest principles.

SULPHATE OF BARYTES.—Sir: I would thank any of your correspondents if they would state the price of sulphate of barytes, both in its crude and manufactured state.—*CONSTANT READER: North Britain, Oct. 18.*

GEOLOGY AND MINERALOGY OF IRELAND.—Sir: It was my intention to have furnished you with a series of papers treating on the geology and mineralogy of Ireland, but I regret, after some labour, I have not been able to acquire that knowledge, the result of which it was my desire to have placed before your readers. I had taken notes of those who had gone before me, and when I availed myself of the information so acquired I should have been glad to acknowledge the source; but I was anxious to have given some notes from personal observation and the result of enquiries. I find this is not to be accomplished, and I sincerely regret that Ireland does not give that encouragement to the enquirer which would most benefit it, by the interchange of ideas, and the information conveyed.—*H. E.: Mount Alton, Templeogue, Oct. 18.*

WHEAL PROCKTER.—Sir: Will "An Original Shareholder" in the Wheal Prockter communicate his address at Leeds to "C. D.," care of Messrs. Cohen and Co., brokers, No. 38, Cornhill, when a "Fellow-Sufferer" will at once communicate with him?—*Oct. 18.*

RIGHT TO FOREFEIT SHARES.—Sir: About eighteen months since a mine in Cornwall was brought out in 10,000 shares of 11. each, in 3s. calls; the fourth call I paid about four months since; since then a fifth call has been made of 5s., which I am unable to pay, and I understand it is certain that there will be another call of 5s. per share. I am a holder of between 400 and 500 shares, all of which I bought at a premium, and for the last 100 I was induced to give 27s. 6d. premium, in consequence of samples of muddle having been tried by Borden's and Perkins's machines, and reported to contain about 3 ozs. of gold to the ton. Now, what I am desirous to know is, whether or not the directors have power to declare these shares forfeited, notwithstanding the 11. per share has been paid by me?—*A. W. Z.: Oct. 19.*

"Investigator" (Cornhill).—One of the directors has been for some time resident abroad. The shareholders, who subscribed under the idea that the mine was to be conducted on the Cost-book System, if this has not been complied with, we should think, could recover from the directors. How much money would be saved, care and trouble avoided, if the public, instead of complaining constantly of directors, would first ascertain whether they were trustworthy or not.

"S. H." (Portland-street, Vauxhall, Liverpool).—On the appearance of any scientific invention before the public we are ever anxious to give as early and as correct a description of its mechanical arrangements or chemical properties as we can possibly obtain. Your communication contains not the slightest information as to how you accomplish the wonderful results to which, for your new machine for raising water, you lay claim. Some scores of hydraulic machines have in the last quarter of a century been patented, which, according to the inventors, were to supersede the principle of the pump, but which have all been consigned to oblivion. Nothing is more easy than to state on paper that your machine "will throw one ton, or one hundred tons, per minute, or more," &c., and that with 2-horse power it will do the work of 20 on any principle; but you must excuse us if we are rather sceptical on these claims, without some description of the mechanical details. Let us know the principle on which it is constructed, and our columns are open for a fair discussion of its merits, and statements of actual facts accomplished in practice.

THE QUEEN'S PALACE IN SCOTLAND.—A "Cornish Miner" informs us that Balmoral is nothing more nor less, when properly interpreted, than a "moral mine," "bal" being indicative of a mine, or the name by which it is best known, and "moral" being emblematic of the Queen.

Union is Strength" (Brighton).—We have always urged that the public should unite to assist Mr. Guedalla in his exposures of the gold mining companies. This he has done single handed, and although the nefarious career of several of them has been checked, yet hitherto none of the connoisseurs have been made to refund the money they have so fraudulently obtained from the public. Combined action is necessary; without it no practical result will be attained. We should desire to see such were the case, but we fear, through the want of some defined end, that promoters of these schemes will not only escape the punishment they so justly merit, but likewise retain the plunder which they have so dishonourably acquired.

"O. S." (Portsmouth) is referred to an article in another column, headed "Improvements in Mining Machinery."

"100 Serip" (Brighton).—A report by Capt. Holman was published some short period since on the property of the Walter Gold Mining Company; he inspected the mine in the month of May last, for a large and influential shareholder. The association has been considered to have all the elements of success; gold has been obtained from the property, the directors are men of high respectability and character, and a meeting will in all probability be called as soon as the arrangements at the mines are completed.

WHEAL PROCKTER.—Sir: In answer to the letter in your Journal, signed "An Original Holder," I beg to say that, since the meeting alluded to by him, Mr. Henwood and myself have been into Cornwall, and have had interviews with the promoters on the subject. These parties gave a verbal promise to execute the agreement contained in the prospectus. We on a subsequent occasion visited Mr. Hill, of Helston, the lessee of the freehold part of the mine, and found that the lease had been made out in the names of Messrs. Richards, Dale, and Prockter. There has been some delay in consequence of the bankruptcy of Mr. Prockter; but as the other promoters are men of standing and substance, we have no doubt the contract will be carried out by them. Your correspondent says delays are dangerous. If the shareholders wish, we will call a meeting at any time to further the object, and hope all who cannot attend will send their proxies.—*JOHN MARSHALL: Horsforth Hall, Leeds, Oct. 19.*

"Clerics of Torquay" is informed that the number of shares, originally 200,000, was limited by the resolution of the last general meeting to 100,000, working capital, which would make the total share capital 133,344l., and the grantee shares reduced in a similar proportion. By a resolution of a special general meeting, under certain circumstances, the share capital might be increased to 200,000l., in which number the certificates are necessarily drawn. For further details we refer our correspondent to the office of the company.

"J. L." (Hampstead).—After the meeting, held on the 23d May, the representatives of the English shareholders, Messrs. John Canningham and Kenneth Mackenzie, attended the general meeting at Paris. The grant, M. de Grimaldi, refused to tender any accounts, and on every question the English gentlemen were outvoted. Having no other resource, they summoned the grant before the Tribunal of Commerce; we have not heard whether as yet they have come to any decision. The English shareholders, through their representatives, have taken the best course they could do under present circumstances; but there is every probability that the affairs will not be settled without considerable litigation. The critical aspect of Spain by no means is an encouragement to the shareholders. A political convulsion would, probably, transfer their property to other interests; indeed, it has been reported that parties connected with the Carlists have obtained a grant of the mines, which would be ceded to them. If that faction was dominant, vested interests would not be regarded, as all acts passed since the death of Ferdinand VII. would have to be revised.

We have particularly to request that subscribers and others, in paying accounts, will send cheques or post-office orders, in preference to postage-stamps.

GOLD COMPANIES.—The continuation of Mr. H. E. Michell's series of papers, showing how Operations could be Conducted to a Successful Issue, will appear in our next Journal.

"T. S. D." (Broad-street).—There has never yet been a meeting called of the Ave Maria Gold Mining Company. The directors have invariably refused to afford the shareholders any satisfactory information. The agent has arrived in London from California, and may be met with at Mr. Ford's, No. 9, Livermore Fountain-hill; he will, no doubt, be enabled to give some account of the present position and future prospects of the company.

THE MINING JOURNAL
Railway and Commercial Gazette.

LONDON, OCTOBER 21, 1854.

We this day present to the public the THOUSANTH NUMBER of THE MINING JOURNAL; and, in taking a retrospective view of our labours since their commencement—now a period of 20 years—we feel no slight pleasure and pride, in the consciousness of having been the medium of communicating to the commercial, manufacturing, and mining classes, many thousands of carefully elaborated reports of public meetings, and of the progress and advance of mining adventure, both at home and abroad. Our columns have, within that period, supplied a continuous series of original articles upon every department of theoretical and practical science, bearing generally upon and illustrating the most interesting topics of the day, and have been the means of introducing to notice, and dispassionately reviewing, a vast variety of novel inventions, applicable to every branch of the arts, many of which have proved to be of the highest utility, and are at the present time in full and successful operation. Ability and industry, often otherwise unfriended, have ever found in our Journal kindly and considerate attention; while projects less practicable have been calmly criticised in the spirit of fair play, and suggestions of value, which would otherwise have been permitted to pass unnoticed, have in many instances, through our aid, been turned to useful and profitable account. The extensive circulation which we command, and the numerous scientific, as well as practical men of name, who favour us with their communications, enable us to avail of eminent correspondents on almost every branch of the various departments of knowledge, which fall peculiarly within the sphere which we have prescribed for our course. As public journalists, devoted in a great measure to the mining interest, we have felt it a duty at all times to urge upon the attention of capitalists any novelty or improvement which came under our notice, and which promised to abridge the laborious operations of mining enterprise, or to enable them to be conducted with greater economy. The person desirous of secure and profitable investment, finds in our columns a ready and elaborate index to the courses, in which he will find the fittest opportunities for the exercise of his deliberate judgment, and the best means of arriving at safe and sound conclusions. Our Journal also forms a complete and impartial record of the adjudications of our high courts on all cases in which questions have arisen on the laws of mines, railways, and joint-stock companies; and, while we have been particularly careful to keep our readers well informed upon all commercial cases of importance as they arise, we also regularly present to them the decisions of the local and inferior courts, on the several questions which in any way affect the classes to whose interests we acknowledge ourselves peculiarly devoted. We have invariably availed of the best sources of information which the proceedings of the Legislature, and the tribunals of the country, have afforded; and we have always been amongst the first to announce any alterations in our judicial system, to which the reforming spirit of the age has given birth. We feel justly proud of the lead we recently took in the discussions on the subject of limited liability in trading associations, having early advanced, and strenuously maintained, the principles so emphatically affirmed by a majority of the House of Commons, in the last session of Parliament.

During the period of our existence, vast changes have taken place, not only in the advance of social improvement and scientific acquirements, but in the progress of mineral discovery, and in the development of colonial wealth. We have steadily kept pace with the march of events, and have invariably proved amongst the earliest chroniclers of the vast masses of information, statistical, geological, and mineralogical, which the activity and enterprise of the Anglo-Saxon race have disclosed in the various quarters of the globe. To the columns of this Journal men of all classes and of all countries must refer when in search of information on a variety of scientific and practical subjects; and we consequently witness with satisfaction, in the most popular and admired publications of the day, ample and repeated acknowledgments to the accuracy and industry of the MINING JOURNAL.

We have thus referred to our past career in no idle spirit of vanity; but the assistance which we flatter ourselves, we have hitherto afforded to the successful progress of practical and scientific mining, is the best earnest of the future, and the public may rest assured that our strenuous efforts shall be zealously and assiduously exerted to uphold the position which we have laboriously but honourably attained.

We this day resume our review of the papers read at the recent meeting of the BRITISH ASSOCIATION, held at Liverpool, which related to mechanical, mineralogical, or mining science. A number of highly interesting papers were discussed in the several sections devoted to mathematical and physical science, chemistry, and geology, which, while exhibiting the spirit of philosophic enquiry, and highly illustrative of many theoretical questions, would not, perhaps, be sufficiently practical for our columns. We, therefore, leave them to those journals exclusively devoted to scientific subjects, and select those from which utilitarian results can be deduced, or are likely to arise.

A communication was read, in the Geological Section, by Dr. WHITTY, Trafalgar-square, London, on the presence of coal recently discovered in the county of Cavan, in Ireland, under rather novel geological circumstances. A large bed of anthracite, 4 feet thick, had been unexpectedly met with by Dr. WHITTY, on a property in that county which he had been appointed to examine. The district was described by him as being of the grauwacke or Silurian rock formation—a formation in which the appearance of coal measures has been hitherto an anomaly almost unknown to geologists, with the exception of that described by Professor HARKNESS as existing in Scotland. From the inclination, a speculative conjecture was hazarded that the seam in question might be a continuation of the Scotch coal bed, and that it would be found continued through the counties of Down, Armagh, and Monaghan. A specimen of the coal, on analysis, presented the following constituents:—Carbon, 77.64; water, 4.35; Ash, 18.01; total, 100. It was found not to contain any bitumen, but a large proportion of carbon, and may, therefore, be good fuel for furnaces, engines, &c. It had been met with in the lowest and most contorted of all the stratified rocks, but it probably appears at the surface in other localities. Modes of working it were suggested. The paper gave rise to some discussion, and the opinion seemed to be generally entertained that it was a continuation of the Scotch coal field. Since this important discovery was made, several tons of the coal have been raised, and sold in the neighbouring towns, and it is likely to prove of great value in a district where great difficulty has hitherto existed in procuring fuel for the burning of lime for agricultural purposes, so very requisite in slate countries.

A paper was read by Mr. HOPKINS, giving the result of experiments, "On the Effect of Pressure on the Temperature of Fusion of different Subjects." At the commencement of his researches, Mr. HOPKINS appears to have enlisted the zealous co-operation of Mr. WM. FAIRBAIRN, who assisted him to the utmost extent by the facilities which his great

establishment afforded. A short description was given of the apparatus which had been used; and of the successive steps by which failures in some contrivances had led him to that which had been ultimately found to answer. From the enormous pressures to which substances were subjected, it had been for a long time found impossible to use glass in order to see what was going on within the cylinders, in which the substance subjected to experiment was enclosed. This difficulty was at length removed by causing an iron ball to rest on the top of the substance within the cylinder, while its presence deflected a small magnetic needle outside, but, the instant the melting of the substance inside permitted the ball to fall, the magnetic needle, returning to its position of rest, indicated the fact. The use of this needle rendered it necessary to make the cylinder of brass; and what is very singular was, that when enormous pressure was laid on the first cylinder which had been tried, the quantity of liquid within diminished. They long sought in vain to discover the cause, but at length it was found that it had wasted by escaping through the very pores of the metal in thousands upon thousands of jets, so minute as to be almost imperceptible. This they at length remedied by greater care in the casting of the cylinder; and by hammering it well on the outside. The method of laying on the pressure was by a piston, well packed and forced down by a lever, which was adopted as the simplest means of getting a numerical estimate of the actual compressing force. The method by which the friction which opposed the motion of the piston, diminishing the pressure so much, had been determined, was by noting the weight required to drive the piston in a certain small distance: this, less the friction, was equal to the compressing force. The weight which allowed the piston to return exactly to its first position was then noted, and this, together with the friction, was equal to the compressing force. As these two compressing forces were equal, the friction was equal to half the difference of the two weights used, and was then a matter of very simple calculation. The results of the experiments were given, and the following are amongst the most curious:—

Substances experimented on.	Pressure in pounds to the square inch.	Temperature Fahrenheit at which it liquified.
Spermaceti.....	0 ... 7790 ... 11,880	124° ... 149° ... 176° 3/4
Wax.....	0 ... 7790 ... 11,880	149° 5' ... 168° 5' ... 176° 5'
Sulphur.....	0 ... 7790 ... 11,880	225 ... 275° 5' ... 285
Stearine.....	0 ... 7790 ... 11,880	153 ... 155 ... 163

When the weight 0 was on the piston, the substance was under atmospheric pressure, or about 15 lbs. to the square inch, and the pressure of 7790 lbs. per square inch was that at which the Britannia Bridge had been raised. The metallic alloys which fuse at low temperatures were also tried, but any elevation of fusing temperature acquired by increased pressure had not been detected, and it was properly stated that these experiments required to be repeated and confirmed before they could be relied on.

Mr. FAIRBAIRN then read another paper, "On the Density of various Bodies when subjected to enormous Compressing Forces." Amongst various facts of great interest, which were accompanied and illustrated by tables, he stated that, besides the enormous pressure used by Mr. HOPKINS, of 7790 and 11,880 lbs. on the square inch, he had applied pressures of 80,000 lbs. and 90,000 lbs. to the square inch, or what would be equivalent to the weight of a column of water over 33 miles in height. Under this enormous pressure, clay and other substances had acquired all the density, consistency, and hardness of some of our hardest and densest rocks.

Many of the material parts of a most valuable paper, "On the Consumption of Fuel, and the Prevention of Smoke," read by Mr. FAIRBAIRN, before the Section of Mechanical Science, had been already anticipated in the columns of this Journal, when directing attention to the report of that very eminent engineer to the local judicial authorities of Glasgow, on the means of relieving that city from the smoke nuisance. He, however, described a furnace, which he conceived offered great facilities to the more perfect combustion of fuel. It was formed of two furnaces united into one, and the proposed improvement consists in a plan by which the gasses issuing from the coals become mixed in a single chamber, and are then passed, in a heated state, over the bridge of the furnace, where they are ignited. By this arrangement, combined with care in keeping the fire-bricks clear for the admission of air, the combustion was rendered very complete. This paper produced an important discussion, in the course of which Dr. ARNOT referred to his improved stoves, and explained the principle on which the combustion of fuel was effected in them. A plan, originally suggested by Dr. FRANKLIN, had been adopted by him, that of inverting a fire-grate, after the ignition of coals, and by this means placing the coals at the bottom and the fire at the top. He explained, that the smoke of bituminous coal was in the nature of evaporated pitch. By the proposed process it is submitted to the action of heat; and the smoke ascending through the hot coals at the top, is completely consumed, being converted into carbonic acid gas and water. It had been estimated that, according to the old plan of a large open fire-grate, five-sixths of the heat of a common fire passed up the chimney. Another curious result was pointed out—namely, that the throats of a chimney may be so contracted as to render the draught sufficiently strong to permit an opening to be made into the chimney from the upper part of a room, without the risk of its smoking, thus securing a more perfect ventilation than can be obtained in any other way. Mr. WILLIAMS's method of consuming smoke by the admission of jets of fresh air at the bridge of the furnace, and Mr. JUKES's moveable bars, were both referred to in terms of approbation during the discussion.

Mr. GRANTHAM, of Liverpool, read a paper on his admirable project of a high level railway from docks, communicating directly with the several wharves, and also with the termini of the railways in that town. We derive great satisfaction from the consciousness that our columns were, we believe, the first medium of early introducing to public notice this proposed improvement, which, when completed, will form in itself an incidental era in the progress of railway enterprise.

A paper, from the pen of Mr. J. NASMYTH, "On a Method of Boring Holes in Rock for Tunnelling Purposes," attracted notice, as well from the importance of the subject as from the high repute of the author. It is well known, that in the ordinary method of boring holes for blasting, by striking the end of the iron bar, or rod, with heavy hammers, much of the effect is lost, the power being in a great degree counteracted by what is termed the *vis inertia* of the bar. Mr. NASMYTH proposes to overcome this defect by converting the bar into a piston-rod, working in an air-tight cylinder, through a stuffing-box. By the adoption of this plan, it is conceived that increased force will be acquired; for when the piston is drawn to the end of the cylinder, the pressure of the atmosphere will force it back with necessarily accumulated weight, and the blow will be given with greatly increased effect. It was suggested that a similar result might be produced, even more readily, by the employment of vulcanised india-rubber springs; and Mr. NASMYTH observed, that any very elastic medium may be made to answer the purpose, but air suggested itself, as affording greater extent of spring. Mechanical contrivances might easily be introduced, adapted to change of shape and direction of the penetrating point.

Mr. GRANTHAM read a paper on Mr. LINDSEY's experiments on a marine telegraph, as recently tried in Portsmouth Harbour, the object of which was to transmit a current of the electric fluid through water, without the use of immediately connecting wires. This subject was alluded to in our last Journal, in reference to statements which have recently appeared in the *Mechanic's Magazine*, of a very conflicting nature, as to the result of experiments on that subject conducted by Mr. BAIN across the Serpentine. Similar experiments had been tried in America, and elsewhere, in which electric currents had been transmitted across rivers by extending wires along the banks, at each side, and immersing copper-plates at each side. By this means, when a thin wire of sufficient length is able to overcome the opposition offered to the electric fluid by the water, a large portion of electricity will be found to pass directly through the water, instead of taking the more extended course through the wire. The experiments in Portsmouth Harbour proved more satisfactory than those across rivers, salt water being found a better conducting medium than fresh; but as yet no satisfactory results appear to have been attained; and although the subject presents a curious electrical problem, we confess we can hardly anticipate any success on which reliance can be placed.

Mr. BAKERWELL then read a paper on Telegraphic Communication between England and America; an object, of course, of transcendent importance, but the importance of which is equalled by the extreme difficulties it presents. The plan proposed was the employment of a simple galvanised iron wire, sufficiently strong to be self-protective, insulated with gutta serena, or other non-conducting substance, covered with tarred hempen yarn. It is conceived that such a wire might, from its comparative lightness and flexibility, be readily stretched across the Atlantic, at a cost of 100,000l. A single wire would, in the first instance, at least be sufficient for the purposes of telegraphic communication. The

difficulties which were originally found of transmitting electric signals through insulated wires immersed in water were referred to, and the success by which they had been overcome seemed to promise that the impediments to transatlantic communication might, perhaps, be also subdued. In this presenting, in a condensed form to our readers, the results of a variety of very interesting communications, we merely fulfil our public duty, as watchful chroniclers of the times, and are not, of course, answerable either for the speculative opinions they present, or for their probable or possible success. The spirit of enquiry is abroad! The British Association may be considered the circle of intellectual light; and the opinions and discussions emanating from its meetings, and diffused by the press, as the rays by which science disseminates its discoveries, reveals the secrets of nature, and illustrates the improvements and progress of art.

A case of some importance with regard to contracts entered into with railway companies was decided in the House of Lords, during the last session of Parliament, and it presents this novelty—that at the time when Chancery proceedings are far less protracted than they formerly were, an appeal from a decree of the late Vice-Chancellor of England, dated the 13th of July, 1844, was not disposed of until nearly ten years after it had been pronounced. The case to which we allude was that of *RANER*, appellant, v. the *GREAT WESTERN RAILWAY COMPANY*, respondents; and it involved a number of novel and important matters for consideration. It is difficult to present in a condensed form all the facts and circumstances of a case which occupied nearly six days in the arguments, and an entire one in the delivery of the judgments; but, stripping it of minute and immaterial particulars, we have endeavoured to bring the real questions, and the points decided, concisely, but at the same time clearly, before our readers. That company was incorporated in 1835; and when they commenced the line of railway, they divided it into two portions, that from Bristol to near Reading being the *B*, or Bristol division—that from Reading to London the *L*, or London part. The appellant was a railway contractor, who had entered into three several contracts with the company in 1836, the 1 *B* contract being for 2½ miles from the Bristol Docks; the 2 *B* contract for about two miles, beginning at Keynsham; and the last, 8 *L* contract, beginning at the Caversham Road, near Reading, for a portion of nearly six miles. The appellant, after the execution of his three several contracts, entered upon the execution of the works, received large sums of money on account, and was proceeding with them, when, on the 24 of July, 1838, the respondents took possession of the works comprised in the two *B* contracts, and seized all the plant, tools, and materials, alleging that the contractor had made default, and that they had, by the express stipulations of the several contracts, a right to seize the whole as forfeited.

The appellant, on the 21st of July, 1838, filed a bill, by which, as afterwards amended, it appeared that during the progress of the works the company, in addition to sums paid on account, had also advanced 28,000*l.* on a mortgage of the plant and materials; and it alleged—first, that the appellant must be considered to have been led fraudulently into the signing of the contracts; secondly, that, at all events, the respondents had by their conduct in taking possession, put an end to the contracts, and that he was entitled to be paid for what he had done, irrespective of the stipulations contained in them, as on a *quantum meruit*; and thirdly, that at the time the mortgages were entered into the respondents were really, if the accounts were fairly taken, indebted to the appellant on account of the works he had actually executed. The bill, after insisting that the appellant was entitled to be paid interest on the sums so due, prayed a general account of what was due to the appellant, at fair prices, for the works he had executed, disregarding the contracts, and charging the respondents with interest on all sums due to him at the dates of the mortgages, and also charging them with the value of the plant and materials of which they had taken possession.

The frauds imputed to the company appeared to be twofold—first, that the price at which the appellant had taken the contracts was much less than he would have required if he had known the nature of the stone at the Bristol end; and secondly, that he was deceived intentionally by the trial pits which had been sunk. It appeared that there are three kinds of stone in the neighbourhood of Bristol—namely, sandstone, soft, and Durns or Durns stone, and Pennant or Hannam stone, both hard materials; and the appellant alleged that the company, through their engineer, Mr. BRUNEL, had induced him to believe that the cuttings would be entirely through the former, while they proved to be in a great measure through the latter. He also complained that the trial pits which the company had sunk, were intentionally too shallow to enable him to form a correct judgment of the true stratification of the ground, through which the cuttings were to be made.

The company principally relied upon the contracts, which were very deliberate deeds, under seal, and executed both by the appellant and the respondents. By those deeds the appellant had contracted to execute the works on the specified parts of the railway, according to the specifications, within fixed periods; and they provided that the appellant should secure their due performance by his bond, conditioned for payment to the company of certain sums for every week's delay in the completion of the works, such sums increasing in certain proportions, according to the length of time. It was further provided, that if the appellant should become insolvent, or from any cause whatever, not the act of the company, should not proceed with the works to their satisfaction, they might serve him with a notice, and, after seven days' default, might employ workmen of their own, paying them out of the moneys in hand belonging to the contractor; that the moneys previously paid to him might, in that event, be deemed full payment and satisfaction for all works already done by him; and, further, that all moneys then or thereafter becoming payable to him, together with the tools and materials, should become the absolute property of the company, and that, if such tools and materials should not be sufficient to pay for the completion of the works, he should make good the deficiency. The deed further declared that the company had agreed to pay the contractor the sum of 68,028*l.* 16*s.* for the completion of the works, in the following manner—namely, to pay every fortnight four-fifths of the value of the works done during that period, until the reserve fund on each contract should amount to 4000*l.*, and then to pay the full value, to be estimated on certificates of their principal engineer, who was, in his calculation, to have reference to the prices in the schedule as to extra works, as well as to the entire costs of the works; and one month after the completion of the entire works to pay one moiety of the 4000*l.*, and the remaining moiety at the end of a year and a month. It was by the deeds further agreed, that the decision of the principal engineer, during the progress of the works, should be final; but, after the completion thereof, that any difference should be settled by arbitrators, the engineer to be the arbitrator of the company. The respondents insisted, that the appellant having violated his contracts, they were entitled to act as they had done, in pursuance of the strict stipulations contained in the deeds. The company relied on the certificates of their chief engineer, Mr. BRUNEL, as conclusive; while the appellant insisted that they were illegal and void, he having been a shareholder in the company at the time he signed them.

By the decree of the late VICE-CHANCELLOR of England, appealed from, he had held the contracts binding. He had affirmed the certificates of the chief engineer, and directed certain accounts of the works done by the appellant, with liberty to him to inspect and survey the road, and subject thereto that the rest of his bill should stand dismissed, with costs. The appellant now complained of only part of that decree; while the company complained of it also, insisting that no accounts whatever ought to have been directed, and that the bill ought to have been dismissed with costs. The House of Lords conceived that the appellant had failed in establishing the charge of fraud against the company—being of opinion that ample opportunity had been afforded, and availed of by him, of judging of the strata; that he had also failed so far as the charges against Mr. BRUNEL were concerned, for by the express contracts of the appellants, the company were made the judges; and there was, therefore, no valid objection to their engineer acting as their agent, although he had shares in the company. The bill must, therefore, be dismissed, so far as it endeavoured to sustain those allegations, and also so far as it alleged that the appellant's signature had been obtained by fraud, so far as it sought a declaration that he had not incurred any penalties, as also so far as it sought a declaration that the defendants were not entitled to take possession of the works, and that by their doing so they had relieved the appellant from all obligations in respect of the contracts, and treated them as abandoned. Although the appellant was not entitled to all the relief he sought, he was entitled in the opinion of the House to some, and the decree of the Court below must be varied accordingly. The three several reserved sums of 4000*l.* each, making 12,000*l.*, had been amongst the property seized and forfeited by the company; for these they were bound to

account. The value of the plant could not be less than 10,000*l.*; and the true meaning of the contract was that the company, although at liberty to seize and appropriate the plant belonging to the appellant, were also bound to account for its value in settling their accounts with him.

The House then declared the appellant entitled to a decree to the following effect:—1st. An account of all sums properly expended by the company in completing, according to the terms and stipulations of the contract, the works thereby respectively agreed to be done by the appellant, including extra work.—2d. That an account should be taken of what is due to the company for principal and interest on the several advances made by them by way of mortgage; and that it ought to be declared that the appellant is properly chargeable on that account for all sums expended by the company in the completion of their works.—3d. The appellant was then declared entitled to an account of what would have been payable to him under the contracts at the completion thereof, in case the works had been finished by him, and not by the company; and also to an account of the reserved funds, and of the value of the plant and materials, which the company took possession of in the months of July and August, 1838. It was further declared that the appellant was chargeable in those accounts with all penalties, and other sums, payable under the conditions of his bonds—such sums to be treated as liquidated damages, unless the appellant could show to the satisfaction of the Court that the default, or delay, in respect of which the damages were claimed, were occasioned by the act or default of the company, their agents, or servants; and no penalties, or sums, were to be claimable on the bonds from and after the time that the company took possession of the works respectively, to which such works referred. The House disapproved of the filing of separate bills; and as the appellant submitted to pay such sum, if any, as should be found due from him; after the accounts had been fairly taken, full justice might be done to both parties by the decree as varied, which also contained a variety of other incidental directions. The House, however, declared that they had no jurisdiction to enable the plaintiff to recover the value of his work in the nature of a *quantum meruit*—that that was a remedy at law, which was open to him, if he wished to assert it, over which a court of equity had no control. As the decree of the VICE-CHANCELLOR had been substantially varied, and as the case was sent back to the Court of Chancery for further enquiry, the House directed that there should not be at either side any costs of the appeal; but that both parties should severally abide their own.

Although many of the causes that have changed the depression of the iron trade, in 1850, to the healthy and remunerative condition of the last three years still exist, we consider it would be most unwise and improvident if the opportunity which will present itself next spring (the opening of the Universal Exhibition at Paris) should find our metallic industries lethargic and unconcerned, taking no heed or trouble to promote the most intimate freedom of trade in coals and iron with our allies and neighbours of France. The "Iron Manufacture" of Great Britain we hope will, therefore, gladly respond to the invitation, and, encouraged by the facilities of transit afforded, and the great advantage of affixing prices, make the most earnest endeavour to show every variety of quality, form, and mode of manipulation that prevails in this country. To the French free-trader this will afford the greatest information and confidence, and the French protectionist will learn how greatly his fears of injury are exaggerated. At what a sacrifice to every other industry a country prohibits the importation and free use of iron, it is unnecessary for us to argue. Free exchange of productions is now, amongst political economists, if not among manufacturers, a settled fact; and no one can deny but that a reduction, or rather annihilation, of the heavy and prohibitory duties in France would be the greatest boon to both countries that could be imagined, even by the wise and fertile brain of the present popular EMPEROR OF THE FRENCH. We should be misleading our iron-trade readers if we allowed them to suppose that the benefits of production and consumption would not be mutual. We should send to France raw material, which they want: we should receive from them ornamental and finished castings, which we want. Who, conversant with the trade, but knows the difficulty to get, in this kingdom, anything approaching to a tasteful column, fountain, or railing, but at an enormous cost. If the French had pig-iron as cheap, they would run away with a large share of our and the world's custom, of such articles; and seeing that we make about 2,750,000 tons of pigs, and they the old 750,000 only, we should enable them to ornament us.

The gentlemen selected by our Board of Trade to assist in forming a collection illustrating the iron manufacture of these kingdoms, Mr. W. BIRD, Mr. S. H. BLACKWELL, and Mr. J. ROBINSON, we trust, will be thoroughly supported by the manufacturers. The different localities of the iron trade in this kingdom, and their several characteristics, are not too well known, even to manufacturers themselves; and a collection which, while forming one great whole, will exemplify the specialties of each district, or seat of the trade, must be of great interest, and a large amount of valuable information to our own, as well as French consumers, must be the result. All we ask of the makers is—*Let the collection be worthy of the trade.*

An adjourned meeting of shareholders in the *CARBURY WEST MINING COMPANY*, whether scripholders or registered proprietors, was held on Wednesday, for the purpose of appointing a committee of investigation into the affairs of this company. The manner the proceedings were conducted (which are fully reported in another column) will be hailed with satisfaction by the various parties interested. There can be little doubt but that the adventure has been carried on in a most loose manner, and those who have been the means of bringing it into its present condition are now doing everything in their power to keep the mine in disrepute, although any information derived from discharged captains and such like characters, will always be looked upon with suspicion. Mr. LUCAS has, from time to time, published in our columns various statements of accounts, which were correctly abstracted from the books, but, as he observed, he made no comments, and it could not be expected that he could attach a long explanation to every item. Mr. LUCAS, no doubt, sunk his money in the concern purely as an investment, and not as a jobber in mines, and as such it was natural he should keenly feel the manner the proceedings had been conducted, but he appears, to a great extent, to have lost sight of the fact that all the misdoings, if there have been any, were done by the parties before the present board came into office, and the conduct of Mr. PETER, the present chairman, throughout has shown only one desire, that of re-establishing the mine. He and his brother director have invested largely in the concern, and have evinced the greatest anxiety to develop the property, and, by the step he is about to take, it is to be hoped his best wishes will be realised.

Various propositions were made for raising capital, and amongst others the issue of the 13,545 reserved shares, but in the present state of the market, it was truly observed that that plan was quite impracticable. In this dilemma their chairman came to their assistance, and to the satisfaction of all present, announced that he was in negotiation with one or two capitalists, from whom he expected to obtain at once an ample sum to purchase the necessary machinery, and effectually develop the mines, provided that liberal terms were conceded, remarking that he was not the only one who had confidence, notwithstanding the reports that were, from time to time, circulated against them. Advocating, as we do at all times, "legitimate mining in Ireland," we trust the parties, who have certainly acted honestly in the matter, will not be disappointed, and that not only the shareholders in the Carbury West Mining Company may yet be remunerated, but, as Mr. LUCAS observed, that the day might arrive when they would be in a position to offer something more substantial than a vote of thanks to their excellent chairman.

THE NEW MOTIVE-POWER—POULSON'S PENDULUM T LEVER.—The documents filed in the Great Seal Patent Office by Mr. Ebenezer Poulson, of Monkwearmouth, in the county of Durham, in the matter of the letters patent for his invention for giving motion to mechanical arrangements where manual force is employed as a prime mover, under the title of "An Improved Mechanical Purchase, applicable to working ships' and other pumps, and to similar purposes," set forth the nature of the said invention in the following terms:—"This invention consists in a peculiar adaptation of lever for working ship and other pumps, and may be employed as a mechanical purchase, when required. The lever is T shaped, and is suspended between fixed bearings on standards, at the point where the horizontal line crosses the vertical line, a heavy weight being fixed to the lower extremity of the vertical shank. In working pumps by this arrangement the rods of the plungers are fitted to the two extremities of the horizontal portion of the lever. By swinging, or oscillating, the weighted portion of the lever, the horizontal portion will receive a vibratory movement, similar to that of an ordinary steam-engine beam. The amount of purchase will, of course, be regulated by the different ratios in the lengths of the vertical arm and the horizontal one; the vertical arm being long the purchase will be increased." Drawings are annexed to the said specification, and described therein, and should be referred to for the proper understanding of the invention.

PROPOSED GREAT CENTRAL RAILWAY, THROUGH THE NORTHERN MINERAL-DISTRICTS.

An outline of the route of this important enterprise appeared in our last Number, and we now proceed to point out a few of the numerous advantages which its construction would confer on general, on mining, and on local interests.

The main line, of about 100 miles in length, with average works, no tunnels, and superior gradients, is well chosen, as starting from the converging point of numerous railways, at the fashionable and rising watering-place of Harrogate, to the converging point of the Scottish trunk railways at the far-famed matrimonial shrine of Gretna Green.

By a glance at Bradshaw's railway map, it is seen that railways from London, Boston, Great Grimsby, Hull, Scarborough, Whitby, and Stockton, are more or less directly connected with Harrogate, besides lines from the inland cities and towns of Manchester, Birmingham, Sheffield, Nottingham, Huddersfield, Halifax, Bradford, Leeds, and York. Gretna Green is also directly connected with Edinburgh, Glasgow, Stirling, Perth, Dundee, Aberdeen, and Scotland generally, with the expected early completion of a line from Dumfries to Port Patrick, where the sea is only 21½ miles in width, to Ireland. From London to Gretna would be about 300 miles, or 7½ hours, at 40 miles per hour for expresses.

It is also contemplated, by the promoters of the Great Central Railway, to seek power to renew so much of the Liverpool, Manchester, and Newcastle Railway (which was ruined by internal dissension, probably caused by the pressure of opponents), as would give nearly direct access between Liverpool and Newcastle, through the heart of Lancashire and Yorkshire, by existing lines. This line was to have effected the following saving of distances:—From Newcastle to Preston, 54½ miles; to Fleetwood, 54½; to Bury, 38; to Liverpool, 25; and to Manchester, 18½ miles. Besides this important saving of distance, the Cleveland iron fields have since risen into great importance, extending from Stockton on the north, to Scarborough on the south, and then passing inland to Northamptonshire, when they appear again at Higham Ferrers in abundance.

By the Great Central Railway effecting a junction with the Bedale and Leyburn line, it would only be about 30 miles to the northern extremity of this iron field at Stockton, or Middlesbrough, by the (late) Leeds Northern line; and from Whitby and Scarborough, access is had by York to the more southern coast portion of the Cleveland ores. These ores being of a second-rate quality, are largely used for mixing with other ores; and the rich hematite ores of Cumberland are in great request, for the purpose of imparting strength to the Cleveland iron. Back Barrow iron was long celebrated in Cumberland for its superior quality, before the iron ores of Furness attracted general notice; but only about 3000 tons of Furness iron ore found its way to Yorkshire in 1851.

It has, therefore, become an object of importance to seek by railway to connect these valuable iron fields, that the ores might be accessible, the one to the other, as required. The shortest route to do this would be by the valley of the Ure, Sedburgh, Lowgill, on the Lancaster and Carlisle Railway, Kendal, and the Lake district, to Furness. To carry out this view, it is proposed to have a branch from the Great Central to the Lancaster and Carlisle, at Lowgill, leaving the rest to that company beyond Lowgill. So much for the southern terminal resources of the proposed Great Central Railway, which, it will be seen, are good, and yet without competition with existing lines.

In its progress northwards, the Great Central Railway passes up the mineral valley of the Ure, through Westmoreland and Cumberland, to a junction with the Newcastle and Carlisle line, by which access is had with Carlisle, and the Furness and Whitehaven Railways, by Maryport to Carlisle. If a railway by the Lake district to Furness is not made, the Cleveland ores, and the Furness and Whitehaven ores, would be connected by the Great Central and existing railways, whilst giving great national advantages to Lancashire, Yorkshire, Westmoreland, and Cumberland. From the junction with the Newcastle and Carlisle line, near Corby Castle, or Fenton, the Great Central proceeds by Longtown to Gretna Green, chiefly through the estates of Sir James Graham, who is known to be favourable to a railway through that district, as conducing to its best interests.

From near Longtown, the Great Central proceeds past Netherby, Canby coal field, Harelaw Lime-works, Newcastleton, Dinlabyr Colliery, Lariston Lime-works, of superior quality, to the summit at the heads of the Liddell and North Tyne. From this summit it passes down past Stob's Castle, to the North British Railway at Hawick, where lines again converge from Edinburgh and from Berwick by the fertile and manufacturing valleys of the Tweed, the Teviot, and the Gala. Thus, at each junction with existing lines, the Great Central would exchange traffic with them in a mutually beneficial manner.

At the highest point of the Great Central lies the North Tyne Plaskett coal field, of 20 square miles area; and about 10 miles from that field are the inexhaustible iron fields of Hareshaw and Redesdale, producing about 9680 tons of very superior ironstone nodules per acre, brought to the surface at a cost of 7*d.* per ton when worked.

Amongst the numerous irons tried by Mr. Stephenson, to ascertain the best for the High-level Bridge at Newcastle, the North Tyne Redesdale iron was one of the very best, although made by the inferior coals found beside the ironstone, and formed one of the irons chosen for making the castings of that bridge.

It is the opinion of experienced ironmasters that, if made with the Plaskett superior coals, and the Lariston excellent smelting lime, both on the route to Carlisle, the North Tyne iron would be second to none, not even excepting the Lowmoor and Bowling irons, of well-known celebrity.

The Plaskett coals are estimated at only 3*s.* 6*d.* per ton at the surface, and would undoubtedly command an extensive sale in Teviotdale, where the outcroppings of this field used to be carried in sacks, on the backs of ponies, a few years back, and brought high prices there.

The celebrated hematite ores of Furness and Whitehaven, raised to the extent of 282,000 tons in 1851, will have railway and sea communication to Carlisle and other ports of the Solway, in connection with the Great Central. The North Tyne ores would, therefore, by the Great Central, be about 48 miles altogether from the mines to Carlisle, and only a few miles more to Annan, where they could be shipped to Whitehaven, Wales, or the Forest of Dean; or the ores of these districts taken to North Tyne, as might be required.

Thus, at the summit of the line, the unusual advantage of receiving an extensive mineral traffic, and conveying it down descending inclines to markets, both north and west, is realised, and is one seldom met with on any railway, which will contribute to good dividends.

The mining and iron-making population of North Tyne would have the advantage in time of the Roxburghshire markets and manufactures at a short distance; whilst these goods would be paid for in coals, lime, and iron, from North Tyne.

Exclusive of these advantages to the mining interests of the north and west of England, the Great Central Railway would shorten the present railway distance from Hawick to Carlisle and Liverpool, 110 miles; to Hexham and Newcastle, 60 miles; to Manchester and London, 110 miles.

All this would be realised without direct competition with existing lines, since a glance at any railway map will show that the Great Central only steps in to fill the vacant seat in the family circle, and would liberally contribute to the prosperity of that circle.

Such are a few of the advantages which the construction of the Great Central Railway would confer, on general, on railway, on mining, and on local interests.

It is stated that the most encouraging support has already been received, besides very general interest taken in promoting it by various local interests. It is also stated that the North-Eastern and the Lancaster and Carlisle Companies intend to support strongly the Barnard-Castle transverse line, described in our last Journal, as a basis of opposition to the Great Central Railway.

The Northern Counties line, by Barnard-Castle, over Stainmoor, had long gradients of 1 in 75, with upwards of 7000 yards of tunnelling; so that, if the line now proposed has no tunnels, either the former twice-levelled and amended line was very badly laid out indeed, or the present one has very severe gradients. Such a line, at best, is little calculated to compare with one having no tunnels, and no gradients worse than 1 in 100 between Harrogate and Brough, and Gretna. Even if made, the Barnard-Castle line should clearly be made to join the Great Central near Brough, and save half its length to the Lancaster and Carlisle, whilst giving the Stockton and Durham district more independent and direct access to Scotland, to Ireland, and to North Tyne, than they can have by the Lancaster and Carlisle Railway. Again, the connection of the Durham districts directly with Lancashire by the Great Central is of much value to that district; so that, in every point of view, the Great Central is far

more conducive to the interests of the Durham and Cleveland districts than the Barnard-Castle scheme.

We, therefore, recommend the promoters of the Barnard-Castle scheme to make common cause with the Great Central one, on the principle of the bundle of sticks—unite and prosper.

THE IRON AND METAL TRADES OF SOUTH STAFFORDSHIRE.

(FROM OUR CORRESPONDENT IN BIRMINGHAM.)

Oct. 19.—At the closing meeting of the ironmasters, held at Dudley on Saturday evening last, the quotations of the preliminary meeting—namely, bars and rods 11½, hoops 12½, and sheets 13½ per ton, were confirmed, but how far they have been generally upheld throughout the district, it is difficult to say. The large houses have not reduced, but it is said that some descriptions of iron can be purchased at 10s., and in some instances have been bought at a reduction of 20s. per ton. This, however, has not been unexpected; on the contrary, it is the consequence of a variety of well-known causes, operating to depress trade, and render manufacturing and stock-holding more difficult. The demand during the week has not been brisk, although increased orders have been issued since the quarterly meetings, and the determination of the large masters has been made known; but the demand, particularly for rails, is exceedingly limited, and all our transactions are marked with increased caution. Although not directly affected by the Liverpool bubbles which have just burst, they have not, however, been without their effect on the general trade of this as well as other districts; and there is an evident disposition on the part of the bankers and money-lenders, to draw in and curtail the means of production. As yet this has not been felt so as to stop the works; and the men in the iron districts are still employed. The accounts of the quarter have been well settled, and as yet we have, perhaps, less to complain of than many other districts in England. One house, that of Messrs. Porter and Stuart, of Birmingham Heath, have suspended payment, and their affairs are now in course of settlement. It is a London house, and the proprietors have been carrying on some extensive works in this neighbourhood, in which many persons are deeply interested. They stand in the directory as iron building roof manufacturers, Gas-street and Spring-hill. Their liabilities amount to £25,000, the whole of which, it is said, they will be able to pay. Their difficulties are attributed to over-stocking, building, and the non-arrival of remittances from Australia. It is proposed, I understand, to pay all small sums in full as soon as possible, and require time for the payment of all in full. It is said that the accounts will show a surplus of some £3000, and that time alone is required. The following circular has been received by the creditors from the solicitors of the company:—

36, Bennett's-hill, Birmingham, Oct. 18.

We regret to inform you that owing to the pressure of unforeseen circumstances, Messrs. Porter and Stuart, of the Spring-hill Works, are under the necessity of suspending their payments. We have to solicit your attendance at a meeting of creditors to be held on Friday next, at our offices, as above, at 12 o'clock, when the position of matters will be explained. We are, &c.,

MOTTRAM AND KNIGHT.

In compliance with the above, the creditors will meet to-morrow, Friday, at 12 o'clock. This is the only unfavourable move in the trade; and it is not likely to have any serious injurious effect, the debts being distributed amongst many, and not very large sums.

In the Copper Trade, prices are firm. A scarcity is reported, and attributed to the falling off in the exports of foreign ore, and the non-productiveness of the home mines. By some dealers, an advance in price has been talked of during the week, but I believe it amounts to no more than a desire to get a rise. The demand for manufacturing purposes are not such as to justify any attempt at a rise, and none with the present demand and supply will take place.

Tin is in abundance here, and to be had easier, and the same applies to all other metals.

In the General Manufacturing Department, there is an evident dullness; and at many of the large works they could dispense with some hands, if they could replace them when required, but as this cannot be done so easily, the men are kept on in many branches, although making for stock. For the Australian market, we are now making very few articles, except bedsteads, farming implements, and those of actual utility.

The Fancy Trade, in all the principal markets of Australia, appears to be quite over-stocked; and, unless for *bona fide* orders, we are not shipping to that quarter. The late arrivals from America have not very materially added to our order-books; and trade, on the whole, rules dull. In the war branches of our trade there is, of course, no want of orders. Unfortunately, they continue to arrive with great regularity, and furnish the gun, sword, and marine-store masters ample employment, which, it is to be regretted, tends very little to the general prosperity of the country.

In Willenhall, there is a falling off in the lock trade; and the manufacturers find it difficult to realise the high price of the raw material.

The makers of Hollow Ironwork, at West Bromwich, Wednesbury, and the surrounding district, are in the same position, and the demand is by no means as active as heretofore.

In the Carriage and Wagon Trade of the district, the demand is brisk. Exclusive of the orders necessary for carrying on the immense increase in the Coal Trade, there are some large orders on the books for railway carriages for foreign lines, exclusive of an increased supply for our lines. The hands employed in the Chandelier and Candlestick Trade, are still in full work, and with every prospect of a good winter's trade.

FRIDAY, FOUR O'CLOCK.—The meeting of Porter and Co.'s creditors is just over. Thirty out of forty of the creditors were represented. The statement of accounts having been submitted by Messrs. Mottram and Knight, on behalf of the firm, three of the largest creditors were appointed inspectors, to ascertain whether they were correct, and report thereon to another meeting this day week, at the same office and hour; and if the statements are correct, there can be little doubt the assignments will be accepted.

IRON AND COAL TRADES OF YORKSHIRE AND DERBYSHIRE.

(FROM OUR CORRESPONDENT IN CHESTERFIELD.)

Oct. 20.—Now that the quarterly meetings of the ironmasters have been brought to a conclusion, the proceedings in connection with the Iron Trade during the week may be reported as extremely satisfactory. Almost every description of mineral continues to maintain its price, and some kinds of ore are realising prices higher than for several years past, without any probability of an immediate reduction. Pig-iron is in much request, and has been dealt in largely during the week. We have had a good demand for plates, and rails are in much better request. Some large orders for manufactured iron were yesterday received by two eminent Yorkshire firms, which will take several months to complete; in addition to which there is some difficulty experienced in completing contracts under execution in due time. There is a steady demand for manufactured iron for home consumption; and this, coupled with several other favourable circumstances, both at home and abroad, afford abundant promise of a good winter's trade. Some new works are in contemplation in Derbyshire; but the present high prices of ores render it somewhat unadvisable to increase the production of manufactured iron to any considerable extent. The effect of these high prices, however, it is confidently expected, will be materially lessened in a short time by the opening of fresh sources of production. The favourable accounts of the harvest in America, and the success of our arms in the East, is gradually inspiring confidence amongst our merchants. The quarterly accounts, so far as we have been able to learn, have been punctually settled; we hear of no failures; and, altogether, the aspect of the iron trade looks extremely vigorous and healthy. The Steel Trade is very brisk, and prices steady. The demand for cutlery and files is as active as for several months past; indeed, all the manufacturers at Sheffield are busy with orders, and the operatives are not only fully employed, but well paid for their labour.

The winter demand for Coals is already felt in the principal mining districts, and prices have in many instances advanced as much as 1s. per ton. Considerable progress is being made in the sinking of new pits, but as yet not one-half of them are so far completed as to yield any coal, whilst others are in active production. The coalmasters are using every endeavour to facilitate and increase production, where a sufficient complement of miners can be obtained. The great difficulty hitherto has been to provide a sufficient number of wagons to afford transit for the increased supplies; but we are enabled to state that this inconvenience has been met to a great extent by the increase of the rolling stock of some of the railway companies, especially the Great Northern. We have also observed a great desire on the part of the middle and upper classes of society to enforce a rigid economy of this article, by only lighting those fires which were absolutely essential and necessary.

A gentleman from Leamington, writing to the office of your correspon-

dent here, says:—"I am desirous of finding a locality where magnesian limestone and gypsum (or plaster of Paris) both occur together, the latter (gypsum) as pure as possible, and the former with the highest proportion of magnesia. I want them for certain manufactures, and, if possible, on the same piece of ground, to save two expenses in rent, apparatus, &c. I also wish to procure a few dozen pounds as specimens, for which I would pay; and at what price for experiment? Also, what is the price in the neighbourhood of Chesterfield per ton of the limestone (magnesian or the lowest bed), and of the gypsum in its natural state?" Perhaps some of the readers of the *Mining Journal* may be able to give some information in reference to the enquiries in the above letter. The writer goes on to say that he wrote to a gentleman in the Peak of Derbyshire, expressing his belief that gold would be found in pieces higher up the country, a fortnight before Mr. Calvert found it so at Ashford, and that he has little doubt pieces weighing pounds might be found still higher up, and that if he were in the locality he would try to form a company to work the ground higher up the Peak.

STOCK, MINING, AND RAILWAY SHARES IN IRELAND.

(FROM OUR CORRESPONDENT IN DUBLIN.)

Oct. 19.—The operations in our "Room," as I believe I have before observed, are like angels' visits, "few and far between." Some days we have not a single transaction in the Government Funds; and the following note will pretty well give some idea of our movements, which certainly are not in the advance, but rather retrograde.

During the past week, on two days no bargain was done in Consols, the extreme fluctuation not having exceeded ½ per cent., the highest quotation being 94½, and the lowest 93½. Grand Canal shares have ranged from 40 to 42, the latter being the last price; Patriotic Insurance, from 7½ to 7½; Hibernian Bank, 31½; Dublin and Belfast Railway, 42½; Great Southern and Western, 45½; Midland Great Western, 46½; Cork and Bandon, 11½; Waterford and Limerick, 24½; Waterford and Kilkenny, 42½; Royal Bank of Ireland, 19; National Bank, 26; Dublin and Liverpool Steam-Ship Building Company, 48.

In Mines, the business has been very limited—General Mining Company shares have been once quoted 2½ per share, or ¼ discount, at which price, I understand, a bargain of 50 shares took place. Some transactions have been effected in the shares of the Mining Company of Ireland, which are firm at the quoted price, 17½. Some shares in the Cobre Mines changed hands at 42½.

With regard to the Railway Interest, I am sorry to note the prices for some lines—Waterford and Limerick shares, with 50¢ paid, are only saleable at 24½; Cork and Bandon, with 50¢ paid, are quoted at 11; Belfast and County Down, 50¢ paid, price 29; Cork, Blackrock, &c., 20¢ paid, 14; Dublin and Drogheda, 75¢ paid, 60; Newry and Warrenpoint, 20¢ paid, 4½; Waterford and Limerick, 50¢ paid, 24½. On one day, the 17th inst., we had no business in Consols, only one bargain in Joint-stock Banks, and none in Mines.

I am the more strongly impressed with the conviction that the "Room" is doomed to fail. There is no business doing, and I regret to say that our Irish capitalists, or those who want to employ money in the Government securities, or in mining or railway shares, do their business through the London brokers; and who, in the present state of things, should blame them? We all look to our own interest; and, with the telegraphic system, it is a complete farce to talk of an Exchange, or Room, kept up in Dublin for half an hour in the day. Let them abandon this, and not meet to parley jokes, when no business can be effected, but get rid of the expense of the room, and let every broker have his own connection, and, when business is to be done, communicate with others. I will not dwell on this subject, which is somewhat sore to "our" members of the "Room;" but I feel that, while I am enlightening your English readers, I am promoting the interests of those who most complain, as my object is to correct abuses, and, by the proper application of capital, to establish our Irish mines, and induce the English capitalist to embark. Unfortunately, as I have already said in a former article, the Irish mines, good in themselves, are destroyed by your London jobbers; and until that is done away with, and we have honest Irish agents, who, with the adjuncts from Cornwall and Devon, can be relied upon, we cannot hope for any support or success. It is not my object to destroy mining pursuits in Ireland, but to advance them, for I am myself interested; but, without honest explorations and reports, how is it to be done? We have had several of your scientific miners or geologists, whose reports are best understood by the fee paid them; and what are the results? Money is given to these men, who know nothing of the locality, whose statements deceive the adventurers, and destroy this country by "opinions" on localities where nothing offers but pay for the report, and where productive ground is left unnoticed and unobserved.

The affairs of the General Mining Company for Ireland I do not find are progressing much towards improvement, but, if I am rightly informed, it is the intention of the board of directors to make a call, which I have all along said was indispensable. The proceedings at the Petty Sessions this last week has terminated in an order for the payment of the men, the directors or agent being cast in open court, while other summonses have, I understand, been issued, and decrees obtained. The August cost, I find, is not yet paid in full, although some orders for meal have been issued in part payment; in the meantime, the miners and surface men have abandoned their work until they get payment of arrears. Three trustees have been appointed in the room of those who vacated office—viz., Sir James Murray, Capt. Carroll, of Nenagh, and Peter Burrows, Esq. I think I mentioned that Messrs. Elliott and Millar, two of the directors, had paid a morning visit to the mine, who have made a lengthened report; should I obtain a copy you shall have the substance, although but little value is to be attached, from the *insouciance* of the parties of mining operations, and more especially this locality. The great wheel which was removed from West Shallee has been at work for the past two months, but since the "strike" there is little or nothing for it to do. The steam engine, &c., from Hayle, is now on the mine, and the bob and cylinder in the house; but I have not heard when it may be expected to be put together.

I have just been informed that a special meeting of the directors is to be held on Tuesday next, to determine on abandoning the underground workings, and confining the operations to dressing and returning the halvas. This is how we manage mines here—the fact is, the company has no tip, although their mines are in Tipperary. I will send you an abstract of the report referred to next week.

I like amazingly the letter, in your Notices to Correspondents, relating to the Coosheen Mine. I am happy to hear they are in a position to send 50 tons of ore to Swansea, "when they can get a vessel." If it realises an equal price to the last, it will go some way to meet cost. I am obliged by the courteous invitation to visit the mine, and may avail myself of it, when you shall have the result of personal investigation, and not simply the information acquired from others. Might I, however, be allowed to ask what number of shares has been paid upon, besides the 6000 or 8000 free shares as purchase money? What the cost since the formation of the company, and the balance in the hands of bankers? What the amount of sales of ores, and, furthermore, what the chance of a dividend, its rate per cent. on capital employed, and when? These are simple questions, and ought to be easily solved.

As regards Irish Consols, your correspondent, "A Victim," seems alive to the movement, or rather, I ought to say, to the absence of any, on the part of the board. Is it I would ask, to be supposed that the chairman is the only one competent to preside? I repeat, there is a game going on, and I counsel the shareholders to be on their guard, while they have a right to enquire as to the past expenditure; and should they get any information, if I am not wrongly informed, it will "a tale unfold."

I am glad to find that the "Roaring of the Waters" is to be changed to an Irish, if not a more euphonious name—that of Leigheloch. It appears that Mr. Arthur Dean, Capt. Joseph Richards, Henry Thomas, and James Hosking, have visited the sett, and reported upon it, one of these gentlemen being, if I mistake not, one of the presiding deities over the Roaring Waters, while Mr. Arthur Dean is placed as engineer. Among its most promising features, you tell us, "may be enumerated the extent of the sett, and very moderate royalty upon the ores, unusual facilities for the conveyance of ores and materials to and from the mines, and an abundant supply of water-power for driving all requisite machinery." Now, this reads very prettily, and is doubtless correct, the only question being, where is the ore, and what the cause of the abandonment of the sett by the former adventurers, and change of name? I find the new company is composed of 20,000 shares, with 2s. 6d. paid, or a capital, assuming it to be all paid up, of 25000. A question arises—is the capital really subscribed?—how many are free shares, and what the purchase money? We are told there are 20 lodes, "almost invariably included in the porphyritic slate ranges, whose strike and declination they follow." Strong

traces of copper are also found. The sett, it is represented, is well situated, being bounded on the east by the county road, and on the west by Roaring Water Bay. Let caution be your motto, and a pick and gad your shield. Our last prices of to-day are soon told—Consols, 93½, National Bank, 26, No price for mining shares. Dublin and Wicklow Railway, 51; Great Southern and Western, 45; Midland Great Western, 46½. We have for shares in banks, insurance, and railways only four prices quoted.

IMPROVED MANUFACTURE OF CHARCOAL IRON AND STEEL.

M. August Langel, of Paris, has suggested a new system of manipulation in the manufacture of iron of superior quality; and proceeds to demonstrate the possibility of an industrial revolution in the United States, where he considers the plan the most applicable, in the manufacture of cast-iron, wrought-iron, and steel. In a short review of the history of iron making, it is shown that, as the demand increased, coal was obliged to be introduced, by which the foundries carried on with wood were beaten out of the field, and Great Britain, with her immense coal fields, became the producers for the rest. Under such circumstances, if suddenly there should be discovered a new means of making iron with wood as rapidly and as economically as it is done at present with coal; and if also the iron so made should offer in quality very great advantages in comparison with that made with coal, it is supposed the consumers would prefer it to English iron, to which at present they are only attracted by its cheapness.

The United States is considered the fittest country to try this experiment, inasmuch as wood is plentiful, and can be obtained at a low price, beds of ironstone are very numerous, and easy modes of transit exist in all directions. The writer then proceeds to state that wood is not charged with those mineral substances which injure at once the calorific effect and the quality of the metals fabricated by it. Coal contains often 10 per cent. of matters either useless or highly injurious; wood, on the contrary, contains hardly one-half per cent. of mineral substances, and which are never injurious; all wood has great chemical uniformity, while coals differ much from each other, occasioning much difficulty in ranging the methods of employing them, but still would not be employed as a combustible without previous preparation, owing to the quantity of water which it contains. The principle of the improvement is then described, which appears to consist in a peculiar preparation of the charcoal, by taking from the wood only the water, and stopping the distillation as soon as the substances which escape begin to produce carbon. This product is called "lignum," and two processes have been adopted for its production. In the first, the gases from the fire-place are brought into immediate contact with the wood, until the temperature is raised to 100° centigrade, which favours still more the vaporization by the tendency the gases themselves have to be saturated by vapour. In the second method, only the heat radiating from the gases in fire-place is employed; not brought into immediate contact with the wood, but conducted in pipes of cast or sheet-iron, around which the wood is piled. This method is said to afford the most satisfactory results, more economic, and not likely to render the wood pyrophoric, or liable to spontaneous combustion on coming in contact with air. There are two or three other methods which may be employed for converting wood into lignite, but which it is not necessary to notice here.

In puddling iron with lignum, the reverberatory furnace is of entirely different construction to those in which coal is employed; it is very long vertically, the grate is very low, and composed only of a few bars to support the wood. The air no longer enters freely into the furnace; the blowers send a graduated current under the wood which traverses it, producing distillation. The current of combustible gases passes into the laboratory portion of the furnace, where the puddling takes place, and is met by a current of air, carefully regulated and driven through a pipe, being a pure combustible gas, free from even a particle of uncombined oxygen. The iron produced by such means, it is said, will in every instance be of good quality; and to arrive at the general expenses of the process, practice alone can decide. The solution of the problem is of the utmost importance to the United States; it will enable them to employ to advantage the mineral wealth scattered over their territory, and upon a point of the utmost consequence will, the writer believes, render them independent of other nations, and eminently, therefore, deserves the attention of the metallurgist and manufacturer.

MORE MINING FRAUDS—THE COST-BOOK SYSTEM.

By JAMES ECKLEY PROCKTER, Innkeeper, dealer in shares, &c., Launceston.—This was a meeting for the last examination, which had been adjourned from last month. The bankrupt was supported by Mr. G. Turner, solicitor, Mr. Pitts appeared for Mr. W. Prockter, and the bankrupt was opposed by Mr. Stogden and Mr. Gurney (of the firm of Gurney and Lethbridge Coward, solicitors, Launceston).

The bankrupt was examined at considerable length by Mr. Gurney, relative to certain mining transactions in which he had been engaged. He stated that he was the purchaser of the Wheal Prockter; in his balance sheet there was a sum amounting to £2000, and £600, set down as having been received for shares. On the other side there were some £1000, and it was stated that at the general meeting of the shareholders, held on the 19th of January, at Launceston, present Captain Richards, J. Dale, J. E. Prockter, and others, it was resolved that the purchase of the mines, including plant, &c., be agreed for at the sum of £400, &c.

The bankrupt said there was no meeting of the sort ever held. He was persuaded by a gentleman connected with the mines to enter this, because he said unless he did it would not be legal, and any profit arising would be absorbed, unless an agreement was entered into by themselves. The names attached were not the signatures of the parties. He had no object in putting these "artificial" names at the bottom, except for the reason he had already given. He could not have any personal object in doing it; he was instructed by Mr. Young to do it, who gave him the form. He himself signed all the names, with the number of shares opposite to each name. He himself signed all the names, with the number of shares opposite to each name.

MR. GURNEY: And that was done, none of the parties being present?—BANKRUPT: Decidedly; Mr. Young told me that was the way to do it. (Sensation.) MR. GURNEY: On the 5th of March, 1853, there was another meeting of the committee, held at the White Hart, Launceston, Mr. Wm. Prockter (bankrupt's brother) being in the chair. At that meeting it was stated that the accounts had been examined and found to be correct. That is all assumed in the same manner.—BANKRUPT: Yes.

MR. GURNEY: There is the name of Wm. Prockter as chairman.—BANKRUPT: He was never present. He (bankrupt) wrote his name. The reason of his doing this was, that the same gentleman as before mentioned told him that without the meetings were held bi-monthly, everything would be informal.

MR. GURNEY: Another meeting was held on the 20th of May, 1853, when it is said that the accounts were examined and deemed satisfactory.—BANKRUPT: That is the same character, but I must tell you that shareholders had no right to examine the accounts until the promoters of the mine had completed the contract set forth in the prospectus. A large number of shares had been transferred to different persons before these meetings were supposed to have taken place.

The Commission observed that it could not be possible that the law could recognise such a course. MR. GURNEY stated that on the 8th of July it was entered that at a meeting held on the mine, present Messrs. Nichols, May, and William Prockter, the accounts were examined and found to be correct, and the operations of the mine were progressing to the entire satisfaction of the board; and signed W. E. Nichols, chairman. He would ask whether that person was present?—BANKRUPT: He was not, nor was Wm. Prockter, who had never held any shares, except when he obliged him by transferring some to some people at Leeds.

The bankrupt was then examined as to his transactions in Wheal Eckley and Wheal James, in which he had made similar entries of meetings when no such meetings were held. In the latter mine he had a large number of shares, and all the accounts which he had filed were gone through with much care to ascertain how far he had exceeded of the disposal of them. It appeared from this examination that with the exception of a few shares they were all duly accounted for. There was, however, one to Mr. Thorne for 50¢. With regard to the transfer of 2150 shares to Mr. Richard Hicks, the bankrupt was questioned as to some length. He stated that in consequence of something which was done by one of the partners in the Wheal James, he was advised to transfer some of the shares to his friends. He accordingly transferred some to Mr. R. Hicks.

MR. GURNEY (holding up the transfer): Who signed that transfer?—BANKRUPT: It is his own signature.

MR. GURNEY: Take care what you say.—BANKRUPT: I think so; it is exactly like his.

MR. TURNER: Is that your own writing, Sir?—BANKRUPT: I almost doubt whether it is Hicks's.

COMMISSIONER: Whose is it?—BANKRUPT: If it is not his, it is mine.

COMMISSIONER: That is an equivocal answer.—BANKRUPT: I think it is mine.

COMMISSIONER: You know it is.—BANKRUPT: Yes, it is.

MR. WILLIAM PROCKTER was also examined. He stated he lent his brother 500¢ before the 25th of September, 1852, in several amounts, but he had no entry of it in any book. He received a check for it at the time, but as it afterwards formed portion of a mortgage to one Davey in the course of the examination, he destroyed the check.

Some questions arose in the course of the examination, as to the great amount which had been paid by the bankrupt to the Rev. Ernest Bennett Society on behalf of his brother; and as the case was likely to last some time longer, and the Court had already sat some hours, it was arranged to adjourn it till the next morning. The secretary of the society was examined at the next sitting, and after a tedious investigation into the extraordinary circumstances, the bankrupt was allowed to pass his last examination.—*Plymouth Mail*.

RECKLESSNESS OF WORKMEN.—We have this week to record two instances of deliberate recklessness on the part of men connected with collieries, one of which proved fatal. Two colliers, F. Hurst and W. Kelly, were committed to prison for three months, for taking off the tops of their lamps at Ince Hall Colliery; and, after an awful explosion of a boiler, 28 feet long, at the Parkfield Colliery, belonging to Messrs. Dimmock, Blackwell, and Horton, which did an immense deal of damage, killing G. Fletcher, the fireman, it was found, upon examination, that the safety-valve had been screwed down tight.

1000

TO IRONMASTERS.—WANTED, by an experienced PRACTICAL PERSON, a SITUATION as SUPERINTENDENT of BLAST FURNACES, FOUNDRY, COLLIERY, &c. Can give unexceptionable reference as to competency, ability, &c. Any party or parties desiring to see the advertiser of great use, as he is well acquainted with the erection of new works, and also with working anthracite coal.—Address, "J. D., Post-office, Cardiff, Glamorganshire."

TO IRONMASTERS.—The ADVERTISER who has been employed for several years in the MANAGEMENT of FORGES and MILLS, will shortly require a RE-ENGAGEMENT. In addition to practically understanding the manufacture of various descriptions of iron, particularly plates and sheets, he has a thorough knowledge of book-keeping, and has been accustomed to make out cost-sheets, &c. References unexceptionable.—Apply, by letter only, to "A. Z., Mining Journal office, 26, Fleet-street, London."

AN EXPERIENCED ENGINEER has DISCOVERED A NEW MODE of HAVING about HALF THE FUEL now consumed in steam-engines of every description, and is anxious to MEET with a GENTLEMAN of adequate means to JOIN him in bringing the invention before the public.—Address, "J. N., Mining Journal office, 26, Fleet-street, London."

AN ANALYTICAL CHEMIST, whose time is partially disengaged, will be happy to UNDERTAKE ANALYSES and ASSAYS of any description on moderate terms, or give LESSONS to AMATEURS. He would not object to a permanent engagement in any manufactory where a thorough knowledge of chemistry might be available.—Address, by letter only, "Alpha," Messrs. Campbell and Henderson, music publishers, Bond-street, London."

TO ENGINEERS.—An ENGINE will be MADE, on receipt of order (in model, not exceeding 1-horse power), DISTINCTLY NEW from the high-pressure three post cup valve engine. There is less friction in the mode of reversing the stroke, the piston will last much longer, and the expansion valve will cut off the steam at different points, as it is in strength in the boiler.—Apply to A. Roberts, Buchholmside, Galashiels, N.B."

OLD IRON RAILS.—WANTED, 25 to 30 tons of OLD IRON RAILS and CHAIRS, the rails from 33 to 40 lbs. to the yard; also, a number of WOODEN SLEEPERS.—Apply, with price, &c., to JOHN CORRETT, The Stoke Works, Burngrove."

OLD BOILERS.—WANTED, SEVERAL OLD CIRCULAR BOILERS, to be used as TANKS.—Apply to Mr. HUMBERT, land agent, Watford, Herts."

BARYTES FOR SALE.—BARYTES, in the CRUDE or MANUFACTURED STATE, of best quality at moderate prices, CAN BE HAD from Mr. JAMES BAYNES, 21, Gowan-street, Glasgow."

GLAMORGANSHIRE COAL AND COKE COMPANY.—Notice is hereby given, that a QUARTERLY GENERAL MEETING of the shareholders in the above company will TAKE PLACE on Tuesday, the 31st October, at Four o'clock P.M. precisely, at the offices of the company, 68, Chancery-lane, London; after which a SPECIAL GENERAL MEETING will TAKE PLACE, for the purpose of appointing or confirming the appointment of certain officers, and for deciding as to the forfeiture of shares upon which the calls have not been paid. By order of the Committee of Management, W. E. NEWTON, Sec."

GREAT CANNIS COOPER MINING COMPANY.—Notice is hereby given, that the SHARES must be LEFT at the offices of the company, 26, Austinfrs, for the purpose of REGISTRATION, TWO CLEAR DAYS previous to the payment of the dividend of 5 per cent., due on and after the 1st November next.—26, Austinfrs, Oct. 20, 1854. R. C. MANUEL, Sec."

TAMAR MARIA MINE.—NOTICE TO SHAREHOLDERS.—The QUARTERLY GENERAL MEETING will be HELD at the Offices, 19, Royal Exchange, on Monday, the 30th inst., at Two o'clock precisely. London, October 13, 1854. H. PERRY, pr Sec."

TINCOFT MINING COMPANY.—FORFEITURE OF SHARES.—Notice is hereby given, that if the CALL of TEN SHILLINGS per share, made 18th May last, be NOT PAID on or before the 1st November next, the SHARES on which the said call REMAINS UNPAID will be ABSOLUTELY FORFEITED. Salvador House, London, Oct. 19, 1854."

TRENAULT LIME AND COPPER MINING COMPANY.—A GENERAL MEETING of the shareholders was held at these offices on the 15th inst., at which the Report was read and the Balance-sheet produced, and the further consideration of them ADJOURNED till Wednesday, the 25th inst., at Twelve on One o'clock, at which the attendance of all shareholders is particularly requested. 5, Martin's-lane, Cannon-street, Oct. 20, 1854. WM. ANDREWS, Sec."

WHEEL UNY.—At a QUARTERLY GENERAL MEETING of the shareholders in Wheel Uny, held at the offices of the company, No. 27, Austinfrs, London, on Tuesday, the 17th October, 1854, P. L. HINDS, Esq., in the chair, The circular convening the meeting and the minutes of the last meeting were read and passed. The secretary read the financial statement, showing a balance against the mine of £375. 7s. 10d., and an estimate of liabilities over assets to the 31st Oct. of 1854. 7s. 10d. Capt. James Rowe's report was read. It was resolved:—

That the accounts, with the report, be received and adopted (errors and omissions excepted). That a call of 40s. per share be made, and payable in 14 days. That Messrs. Hinds, Mant, Kennedy, and Spalding, form the committee of management for the next three months. That a vote of thanks be given to the chairman. EDW. KING, Sec."

IMPERIAL BRAZILIAN MINING ASSOCIATION.—Notice is hereby given, that the HALF-YEARLY GENERAL MEETING of the proprietors of this association will be HELD at the office of the association, Winchester House, Old Broad-street, on Thursday, the 9th of November next, to receive the report of the directors. The chair will be taken at Two o'clock precisely. By order, JOEL HITCHENS, Sec."

LIBERTY MINING COMPANY.—Notice is hereby given, that the next ORDINARY HALF-YEARLY MEETING of this company will be HELD at the London Tavern, Bishopsgate-street, on Thursday, the 2d day of November, at One o'clock precisely, to transact the ordinary business of the company; and that, immediately after the conclusion of such business, the said MEETING will be made SPECIAL, for the purpose of considering a proposal for dissolving this company, and selling the mines and property to a new company, or for adopting such other measures for raising money as may be deemed expedient. H. H. ROOD, Sec."

ANGLO-CALIFORNIA GOLD MINING COMPANY.—Notice is hereby given, that the ANNUAL GENERAL MEETING of the shareholders of this company will be HELD at the Freemasons' Tavern, Great Queen-street, Lincoln's Inn-fields, on Tuesday, the 31st inst., at Twelve o'clock, for the purpose of transacting the ordinary business of the company. By order, GEORGE F. GOODMAN, Sec."

GUEDALLA TESTIMONIAL.—A SUBSCRIPTION is NOW OPENED, for the purpose of presenting this gentleman with a PIECE OF PLATE, as a testimonial for his unremitting exertions, at great personal expense, in exposing the dishonest and unjustifiable proceedings in gold mining companies, by which many were prevented being defrauded. Donations to be addressed to the "Treasurer," 17, King's Arms-yard, London. Subscriptions received to 19th October:—

Charles Manby, Esq., 26, Montpelier-terrace, Brighton.....£10 0 0
A Poor Half-pay Officer, per ditto.....0 10 0
M. A. Goldsmith, Esq., 29, Rue Bassa de Rempart, Paris.....5 0 0
Frederick Grant, Esq., Manchester.....2 0 0
John Morison, Esq., 23, Cavendish-road West, London.....2 0 0
Henry Gibson, Esq., 17, Gracechurch-street.....1 0 0
G. J. Soper, Esq., 154, Strand.....1 0 0

RENEWAL OF THE BANK OF ENGLAND CHARTER.—The time having expired which empowers the Government to give notice to the Bank of England, that this Charter may be revised or otherwise, and without which the Act of 1844 will continue in full force with all its strange anomalies and restrictions upon the commerce and industry of the country, merchants, bankers, and others interested in placing our monetary system, and more especially the issue of Bank Notes, in harmony with our increased commerce at home and abroad, are solicited to give their attention to this subject before the coming Session of Parliament, and to assist by every means in their power to extend a knowledge of the question throughout the great commercial and manufacturing towns of the United Kingdom. All parties desirous of assisting to accomplish this object, are invited to join a Society, now in progress of formation, with the view of uniting, in one body, all practical men, that they may point out to the Legislature the true nature of a currency system adapted to meet the rapidly advancing progress of Society, the requirements of our extended commerce, and the vastly increased production of the precious metals. All communications, in furtherance of the views of the Society, may be addressed to the Editor of the Bankers' Circular, Secretary (pro tem), 32, Lombard-st., London."

THE GENERAL ANNUITY ENDOWMENT ASSOCIATION.—We recently noticed the peculiar advantages of this association, as calculated to secure a provision for the widow or orphan upon terms more easy than any other office, which is accomplished from a certain system they were the first to adopt—that is, in the event of the nominee dying the amount paid reverts to the office; thus, the head of a family can, for a small quarterly payment, secure to his widow one or six annuities of 19l. each, but in the event of his surviving all payments fall in for the benefit of the existing annuitants. The association has been established 25 years, and, as a proof of its security, the financial statement shows the balance in favour of the association at the last meeting to be 265,842l.; and out of that amount 263,039l. was invested with the National Debt Commissioners, and 2801l. in the 3½ per cent. stock. Notwithstanding the amount paid to annuitants in one year was 15,131l., the capital increased during the same period 4670l.; and, we are informed, the next accounts will show that the members admitted during the last year numbered more than double those admitted the preceding."

MARRIED.—On Saturday, the 14th inst., at St. James's, Piccadilly, by the Rev. Henry Bloxam, M.A., assisted by the Rev. James Harrison Watson, brother of the bridegroom, Joseph John William Watson, Esq., Ph.D., C.E., F.R.S., of 44, Upper Brook-street, Grosvenor-square, to Georgiana Anne Welch, only daughter of the late John Gregory Welch, of Arle, in the county of Gloucester, Esq."

PRINCE ALBERT TUN AND COPPER MINE, PERRANZABULOE, CORNWALL. together with the WHOLE of the NEARLY NEW and COSTLY MACHINERY."

MESSRS. GADSDEN, WINTERFLOOD, AND ELLIS have received instructions to SELL, BY AUCTION, at the Mart, on Wednesday, the 25th October, at Twelve, in One Lot, the above valuable MINE, situated at Perranzabuloe, Cornwall; also, the MACHINERY, comprising a first-class 24 in. cylinder STEAM-ENGINE and BOILER, STAMPS, PUMPS, and all the requisite gear and appurtenances for working the mine on an extensive scale.—Full particulars may be obtained of D. G. GOATLEY, Esq., 75, Cornhill; at the Mart; and at Messrs. GADSDEN, WINTERFLOOD, and ELLIS's offices, 18, Old Broad-street."

GUSTAVUS MINE, CAMBORNE.—MATERIALS FOR SALE.

MR. JNO. LITTLE WILL SELL, BY AUCTION, on Wednesday, the 25th inst., at Eleven o'clock, the following MATERIALS:—Capstan, shears, and capstan-rope; 44 9 ft. 10 in. pumps; 7 9 ft. 9 in. pumps; 19 ft. 8 in. working-barrel; 2 10 ft. 9 in. working-barrels; 1 9 ft. 9 in. windrope; 1 3 ft. 10 in. matching-piece; 1 9 ft. 12 in. pole-case; 1 2 ft. sheave; 1 9 in. doorpiece and door; 3 pieces 10 in. rods; 3 pair strapping-plates; iron shaft cover; mine bell; lot of miners' chests; 36 in. bellows; lot of bucket brasses; brass clack seats; also, a lot of old brass; grindstone; smiths' scolding box; smiths' trough; white fault rope; large candle chest; several lots of timber and plank; large yard door; small yard door; 4 large discharging, nearly new; 1 birch ditto, with circular ends; also, a small rough-drawn shaft and wheel; 1 new ditto; 2 deaks; miners' tools, with quadrant; knives and forks; saws; 2 iron trays, clack seats, &c. Also, the counting-house carpenter's shop, smiths' shop, gig-house, stable, and walled kitchen garden, the same being subject to a high rent of 30s. per year, and formerly in the occupation of Capt. Rich. Vivian, and known by the name of St. Maradov Villa, determinable upon one life.—For further particulars, apply to the auctioneer, Redruth; or to the agent, on the mine."

VALUABLE MINING MACHINERY AND MATERIALS FOR SALE.

MR. GUMMOE has been favoured with instructions to SELL, BY PUBLIC AUCTION, at the ROCKS and TREVERNY UNITED MINES, near St. Austell, on Wednesday, the 25th inst., and following days, all the MINING MACHINERY and MATERIALS thereon:—viz., a 36 in. cylinder PUMPING ENGINE, 9 ft. stroke in cylinder, 10 ft. in shaft, with steam-cases, about 10 tons of boilers, boiler furniture, &c., complete, in good working condition; a 36 in. double-acting rotary engine, 9 ft. stroke, equal beam, with 18 tons of boilers, steam-cases, 24 tons of fly-wheels, main shaft couplings, and east-iron axles, with 72 heads of stamps, complete, with axle-horses, stamps frames, &c. (the engine is of the latest construction, and in the best possible condition, having been erected new only four years); a 25 in. cylinder double-acting winding engine, 5 ft. stroke, with east-iron perpendicular cage, fly-wheel, &c., complete; 1 18 ft. water-wheel, 2 ft. breast, with rough-drawn shaft and wheel gear, with horizontal cage, machine house, &c., complete; an excellent capstan and shears; about 90 fms. 1 in. rope, nearly new; 36 fms. 13 in. plunger-lift, complete; 17 fms. 13 in. plunger-lift, complete; 18 fms. 10 in. pumps; 10 fms. 8 in. 2 ft. 6 in. 6 in. lifts; bucket rods; 9 in. main rods; rod plates, &c.; 80 fms. 1½ in. horizontal rods; shaft, balance, and angle-bobs; pulleys and stands; several tons of railroad iron; tram wagons; steam-pipes, with a quantity of various things in east and wrought-iron; ladders; cisterns; a drying tube, 36 ft. long and 4 ft. diameter; a large quantity of steel and bar iron; an extensive assortment of smiths', miners', and other tools; blocks, double-purchase crabs, handspikes, and other lifting gear; several good horse wheels, with shaft lines, &c.; ropes of different sizes; kibbles; machine frames; pulley stands; a quantity of ½ and other chains; useful old brass; oil, tallow, candles, powder, and nails; also the dressing tools, comprising buddles, tin frames, sieves, hutches, drags, launders, barrows, shovels, &c.; a large quantity of new and old timber, for general, mine, and building purposes; a lot of old junk and east-iron; with counting-house furniture, surveying instruments, and numerous other articles. Full particulars will be given in catalogues on the first day of sale; and, in the meantime, further information may be obtained on application to Mr. Watts, at the mines; Mr. G. G. GUMMOE, St. Austell; or to the auctioneer, at his offices. The sale will commence each day at Ten o'clock A.M. precisely. Dated Imperial Life and Fire Insurance Office, St. Austell, Oct. 12, 1854."

FIVE DAYS' SALE.—BRITANNIA FOUNDRY, LEEDS. MOST IMPORTANT TO ENGINEERS, MACHINE MAKERS, TOOL MAKERS, RAILWAY COMPANIES, CONTRACTORS, SMITHS, IRONFOUNDERS, BROKERS, AND OTHERS."

MR. WHEATLEY KIRK is honoured with instructions from Messrs. Ardill and Pickard, the eminent machine makers, ironfounders, &c., to SELL, BY AUCTION, on Monday, Tuesday, Wednesday, and Thursday next, 23d, 24th, 25th, and 26th October, and Friday, 27th October inst., commencing each day at Eleven o'clock (in consequence of a dissolution of their partnership), on the premises of their works, called the BRITANNIA FOUNDRY, Armley-road, Leeds, the WHOLE EXCEEDING VALUABLE and MODERN PLANT, TOOLS, &c. MACHINERY, UTENSILS, STOCK IN TRADE, &c., which are all in the best working condition, chiefly by Smith, Beacock, Tannett, Shepherd, Hill, and Spink, Collier, &c., viz.:—Four powerful planing machines (some of which are fitted with double tool boxes), to plane from 3 feet 6 in. to 18 feet in length, and proportionate width and height; 16 screw-cutting and slide lathes, varying from 8 to 16 in. centre, head-stocks, and in cast metal bed, from 6 ft. to 20 ft. long, complete with top driving apparatus, &c.; 24 double and single-gear hand lathes, from 7 to 12 in. centre, complete, with ditto, ditto; 3 self-acting lathe lathes, with universal chucks complete; 3 single and double-gear drilling and boring machines; 4 shaping machines (various), from 7 to 20 in. stroke; 2 slotting machines, with 7 in. and 9 in. stroke respectively; all the smiths' tools, anvils, bellows, tongs, swages, slake troughs, &c.; all the glassers and grinders' utensils; large quantity of excellent vices, benches, steel turning, boring, drilling, and planing tools; the valuable patterns and models in brass, iron, and wood; the whole of the valuable stock in trade of pig-iron, bar, and rod-iron, steel, copper, brass, lead, &c. The stores include a large quantity of emery in casks, of the best quality, tallow, oil, new files, bolts, and nuts, &c. Catalogues may be had at the works; or at the offices of the auctioneer, Cross-street Chambers, Cross-street, Manchester; and 4, Kirkgate, Leeds; or by post, on receipt of eight stamps."

TEN DAYS' SALE.—IRELAND.—VICTORIA FOUNDRY, DUBLIN.

MR. WHEATLEY KIRK is honoured with instructions from Messrs. John and Robert Mallett, ironfounders, engineers, &c., of the Victoria Foundry, Dublin, to SELL, BY AUCTION, on the above premises, on Thursday, the 2d of November, commencing at half-past ten o'clock, the WHOLE of the VALUABLE PLANT, consisting of STEAM-ENGINES, BOILERS, TOOLS, UTENSILS, MACHINERY, STOCK IN TRADE, &c.—viz., 16-horse high-pressure beam engine, cylinder 12 in., stroke 2 ft. 10 in.; 30-horse portable condensing beam engine, cylinder 15 in., stroke 3 ft.; 30-horse cylinder and nozzle; 16-horse condensing steam-engine, cylinder 18 in., stroke 3 ft., by those far-famed engineers George Forrester and Co., of Liverpool; 6-horse portable high-pressure beam engine, cylinder 8 in., stroke 2 ft.; 3-horse high-pressure horizontal engine, cylinder 8 in., stroke 2 ft., with fly-wheel and boiler complete; 2-horse high-pressure horizontal engine, cylinder 8 in., stroke 15 in.; several second-hand steam-engines and parts of engines, from 20 horse power downwards; high-pressure boiler, 8 ft. long, 3 ft. diam.; ditto 15 ft. 6 in. long, 3 ft. 6 in. diam.; ditto 13 ft. 6 in. long, 4 ft. diam., with flue through; all the powerful and valuable main, upright, and line shafting; counter ditto; bevil, mitre, and spur wheels, pulleys, hangers, pedestals, wall boxes, brass steps, &c. THE MECHANICS' SHOPS contain blowing machine, with driving apparatus and fittings; large boring and turning double gear lathe, on cast metal bed, 21 ft. long, 3 ft. 4 in. in centre, with a 13 ft. diameter; double gear lathe, 11 ft. 6 in. in centre, on cast metal bed, 13 ft. 6 in. in wheel 8 ft. 7 in., raised to 9 in. double-gear screw-cutting and slide lathe, bed 9 ft. long; 2 slide lathes, 11½ in. and 9 in. centres, on beds 10 ft. and 33 ft. 9 in. long respectively; 5 double-gear hand lathes, from 7½ to 15 in. centres; 7 single speed hand lathes, from 7½ in. to 1½ in. centres; double-gear vertical boring machine; large boring machine, will take in 6 ft. 6 in. wide; several single and double power drilling machines; large planing machine, will plane 16 ft. 10 in. long, 4 ft. wide, and 4 ft. deep; ditto, will plane 10 ft. 10 in. long, 2 ft. wide, and 1 ft. 8 in. deep; hand planing machine, will plane 3 ft. 6 in. long, 2 ft. wide, and 1 ft. 8 in. deep; 2 double-gear, 2 double-gear, single power, ditto, with top drive; 2 planing machines, large boring bar, cast metal cylinder; nut-cutting machine; direct action German steam-pump, 8 in. stroke; cast metal circular benches and vices. The tools are principally by Lewis, Whitworth, Nasmyth, Bodmer, Fairbairn, and other first-class makers, and include a valuable collection of taps and dies, drills, ream and other bits, augers, and numerous other small tools; large quantity of smiths and boiler makers' tools, anvils, bellows, slake troughs, &c.; 3 lever punching and shearing machines; 1 large ditto; cast-iron boilers, various."

IN THE FOUNDRY AND YARD.—Ponderous double purchase yard crane and fittings; 3 large foundry double purchase cranes, with traverse motions; blocks, chains, &c.; all the excellent moulding boxes; strong four-wheeled lorry; 3 core carriages; 3 large cast metal cupolas, will melt from 2 to 11 tons; single and double purchase crabs; 3 weighing machines, up to from 5 to 8 tons; platform weighing machines; scales, beams, and weights; force-pumps; fire-engines, &c."

IN THE STORES.—Chains, blocks, ropes, oils, paints; copper, iron, and steel wire; bolts and nuts; stocks, taps, and dies; wood and iron screws; washers; glass and emery paper; nails, brass taps, and a variety of other brass work; copper and brass pipes; bay, red, hoop, and other iron, and steel of various kinds. THE STOCK OF TIMBER includes green heart oak, teak, birch, deal, &c.; building materials, windows, stone, bricks, &c. The truly valuable models and patterns in lead, brass, iron, and wood, are in the best possible condition, and modern in design. All the gas-fittings, piping, burners, &c., throughout the premises; together with a vast assemblage of other valuable plant, tools, utensils, stock in trade, and effects. Catalogues may be had at the Works in Dublin; at the offices of the auctioneer, Cross-street Chambers, Cross-street, Manchester; or 4, Kirkgate, Leeds; or by post, on receipt of twelve stamps.—N.B. Sale to begin each day at Half-past Ten o'clock."

MINE MATERIALS AND MACHINERY FOR SALE.

BY PUBLIC AUCTION, at WEST WHEAL ALFRED, in the parish of St. Erth, distant one mile from the port of Hayle.—To be SOLD, BY PUBLIC AUCTION, on Monday, the 23d inst., at Eleven o'clock A.M., the following MATERIALS and MACHINERY:—An 80 in. cylinder PUMPING ENGINE, 10 ft. stroke in cylinder, and 8 ft. in shaft; 2 wrought-iron boilers, nearly new, about 12 tons in each; 2 20 in. H-pieces; 2 20 in. doorpieces; 2 18 in. doorpieces; 1 12 in. doorpiece; 1 12 in. 12 ft. working-barrel; 1 12 in. 10 ft. ditto; 1 30 in. 6 ft. flat-bottom windrope; 1 19 in. ditto; 2 18 in. 8 ft. ditto; 1 18 in. 7 ft. ditto; 1 18 in. 9½ ft. sinking windrope; 1 14 in. 9 ft. ditto; 1 12 in. 9½ ft. ditto; 1 20 in. 10 ft. plunger-pole, with stuffing-box and gland; 1 15 in. 13 ft. ditto, with ditto; 1 plunger-pole, 10 ft. long; 1 20 in. 8 ft. pole-case; 2 feed poles and cases; cataraet pole and case; 2 19 in. clack matching-pieces; 4 18 in. ditto; 1 17 in. ditto; 1 19 in. 9 ft. pumps; 1 19 in. 7 ft. ditto; 1 18 in. 7 ft. ditto; 3 matching-pieces; lot of wrapping and hanging bands; 7 pair sagged strapping-plates; oak capstan axle; water-wheel, 30 ft. diam., 2 ft. breast; horse wheel kibbles; pulley stands; rod and connecting staples; staples and glands; bolts; door hinges; spanners; 5 east-iron rolls; pump rams, valves, buckets, plungers, and brasses; 2 3 in. drop screws; 10 fms. 3 in. pump rods; plunger blocks; cast iron sockets; spur-wheels; foot pipes; screwing machine; 15½ in. turn pipe; 8 ft. sheave; wrought and east-iron; square, round, and wheelbarrow iron; boxes and prongs; 2 smiths' anvils; 3 smiths' bellows; 1 smiths' trough; 5 pairs 3 in. joints, and clasp iron; blocks, pins, and eyes; whin rope; iron and steel shovels; galvanised jiggling bottoms; sieves; hoop iron; wheelbarrows; landing ditto; carpenter's benches; miners' chests; and a large quantity of plank, whole and half timber. For further particulars, apply to Capt. THOMAS RICHARDS, Hayle. Dated Oct. 4, 1854."

IN THE COURT OF THE COMMISSIONERS FOR SALE OF INCUMBERED ESTATES IN IRELAND.

SALE AT HALF-PAST FIVE, on Friday, the 24th day of November, 1854. MR. GEORGE C. HYNDMAN, Auctioneer, will, in pursuance of the Commission's directions, on Friday, the 24th day of November, 1854, at the hour of One o'clock in the afternoon, at his Rooms, No. 7, Castle-street, Belfast, SELL, BY PUBLIC AUCTION, the following ESTATE, situate in the barony of Ballynash, parish of Ballynash, county of ANTRIM, containing 1884a. 4s. 39p., statute measure, held under a fee farm grant from the Earl of Antrim, dated the 10th day of March, 1749, at the rent of £40, late currency, with 6d. in the pound receiver's fees, the buildings on which will be submitted to Charles James Hargrave, Esq., Q.C., the Commission's in this matter, on Tuesday, the 28th day of November next, for his approval, with further notice to any person."

Abstract Rental and Valuations.

No. of Lot.	Townlands.	Quantity.	Annual rent.	Mr. Gordon's valuation.	Original valuation in 1830.
		Cunningham.	Statute.	£ s. d.	£ s. d.
1	Dunmanning	540 1 0	607 3 6	326 18 8	653 3 10
2	Killygowan	514 3 32	664 3 32	324 17 3½	329 15 10
3	Killydonnelly	414 2 39	553 2 11	224 4 4½	286 18 8
4	Duncahy	821 3 28	1061 1 20	404 13 9	501 3 10
5	Dromore	421 0 27	342 12 32	335 4 10	323 0 0
6	Killygreen, South	252 3 9	326 2 32	123 18 2	171 15 4
7	Killygreen, North	351 2 14	454 0 8	160 0 0	226 12 0
Total		3317 2 8	4283 0 30	1826 17 1	3492 17 6

Particular attention is called to the fact, that the valuation by Mr. Griffith of the estate was made so far back as the year 1838. J. LOCKE, Auctioneer, Clerk. Dated 5th August, 1854."

The above lands are (with other lands not for sale) held under fee farm grants from Lord Antrim, dated 10th March, 1749, at the yearly rent of £40 late currency, and in the pound receiver's fees.—This estate will be sold primarily liable to £271 10s. 6d. in the pound rent charge payable out of the lands amounting to the sum of £24, the entire of which is paid by the tenants, in addition to the rents above stated. The above estates are well worthy the attention of capitalists, and afford a most desirable opportunity for investment. It lies in a ring fence, and is a splendidly circumstanced property, situate in one of the best parts of the county of Antrim, within 5 miles of the rising town of Ballymena. There are three bleach-works on it, the mills, and ample water-power. The land is chiefly of a superior quality, adapted either for tillage or grazing purposes. The Ballymena and Coleraine Railway, which in many instances, have expired, and are now only depending on old leases, the death of whom there will be, in each instance where the lease falls in, a considerable rise. The estates have been lately surveyed by Mr. John Gordon, C.E., whose report is attached to the rental. The Government valuation is considerably lower than Mr. Gordon's valuation, which is satisfactorily accounted for on account of being done in 1835, since which time there has been no re-valuation. Private offers for any of the lots will be received by the solicitors for the estate, on or before the 1st day of November, and will be considered by the Commission, up to and not later than the 1st day of November, and will be submitted to Mr. Commissioner Hargrave for his approval. For rentals, and further particulars, apply at the Court of the Commissioners, Henrietta-street, Dublin; Messrs. Lewis and Hows, solicitors for petitioner, having the carriage of sale, 22, Nassau-street, Dublin, where maps and valuations can be inspected; to SAMUEL R. MAGILL, Esq., Creeve, Cookstown; or to GEORGE P. WARD, Adam-street, Adelphi, London."

IN THE COURT OF THE COMMISSIONERS FOR SALE OF INCUMBERED ESTATES IN IRELAND.

TYRONE ESTATE.—SALE on Friday, the 8th day of December, 1854.

THE COMMISSIONERS will, on Friday, the 8th day of December, 1854, at their Court, 11, Henrietta-street, in the City of Dublin, at the hour of Twelve o'clock, SELL, BY PUBLIC AUCTION, the following ESTATE, situate in the barony of Moy, county of TYRONE, containing 2374a. 3s. 10p., statute measure, held in fee, in the following lots, viz.:—

No. of Lot.	Denominations.	Statute measure.	Yearly rental.	Valuation by order of Court.	Griffith's valuation of 1831.
		A. R. P.	£ s. d.	£ s. d.	£ s. d.
1	Tamnyllennan	144 1 18	111 3 8	230 16 3	240 7 0
2	Boyd's Farm, and part of Common Moss	60 3 38	47 0 36	135 14 1	163 19 0
3	Roskerow, and Out-lands of Galvally	154 3 21	110 3 31	125 1 6½	155 2 6
4	Drumagallagh	256 1 10	108 1 36	221 5 4½	243 0 6
5	Urbairagh	57 3 11	44 3 4	29 11 8	41 8 6
6	Linnaglass	102 1 19	79 1 3	58 2 2½	64 3 0
7	Ballyvenagh	358 1 19	277 2 3	232 6 4	239 16 0
8	Drumagallagh	56 2 1	43 3 1	21 5 3	37 7 0
9	Oghill	164 0 6	127 6 8	240 0 0	106 15 8
10	Carnan	465 0 11	360 0 12	309 18 8	349 17 0
11	Killycoppy South	373 0 36	294 3 38	177 4 3½	203 11 8
12	Drumagallagh, Extra	180 3 22	140 0 12	110 18 0	167 15 0
Total		2374 3 10	1838 3 38	2015 10 7½	2033 2 0

Particular attention is called to the fact, that the valuation by Mr. Griffith of the estate was made so far back as the year 1838. J. LOCKE, Auctioneer, Clerk. Dated 5th day of August, 1854."

This is a splendidly circumstanced estate, and is well worthy the attention of capitalists; it affords a most desirable opportunity for investment, and is situated in a beautiful spot, adjoining the town of Stewartstown. The land is of superior quality. The leases of the estate are very old, and are only depending, in many instances, on one old lease. On the expiration of the leases there will be a very considerable rise upon the estate. The estate has been lately surveyed by Mr. John Gordon, C.E., whose valuation and report are attached to the rental. The greatest rent charge payable out of the lands, &c., amounts to the sum of £28, the entire of which is paid by the tenants, in addition to the rent above stated. Proposals for the purchase by private contract for any part of the estate, and submitted previous to the day of sale, for the entire or any part of the estate, and submitted to Mr. Commissioner Hargrave, Esq., Q.C., the Commission's in this matter, for his approval. For rentals, with full particulars, apply at the office of the Commissioners, 11, Henrietta-street, Dublin; to Messrs. Lewis and Hows, solicitors for the petitioner, having the carriage of sale, 22, Nassau-street, Dublin, where maps and valuations of the property can also be inspected; to GEORGE P. WARD, Esq., 18, Adam-street, Adelphi, London; or to S. R. MAGILL, Esq., Creeve, Cookstown."

TO COAL AND IRONMASTERS.—TO BE LET, on royalty, at Longton, Staffordshire Potteries, a valuable and extensive COLLIERY, known as the OLD MOSHIELD COLLIERY, containing the Mossfield Coal, Yard Coal, Birchies Coal, Ten Feet Coal, Hard Mill Coal, Banbury Coal, and Cockfield Coal. There are requisite SHAFTS, WINDING and PUMPING ENGINE, with BUILDINGS, MACHINE, &c., on the premises. The locality of this colliery is the best in the district, being within 300 yards of the town of Longton, at which place the assumption of coal is very great. The North Staffordshire Railway almost adjoins the estate. The excellent quality of these coals is well known in the district. For particulars, pit shafts, pit frames, ropes, chains, &c., to be taken at a valuation, apply to Mr. R. H. GOGG, Chesterfield, Derbyshire; or to Mr. G. L. BOND, Tiled House, near Indley, Staffordshire."

TO METAL MANUFACTURERS.—FALSE GILDING. SILVERING, TINNING, ZINCING, &c., by quite a NEW PROCESS, in the working of which, enquire of Mr. DINA, engineer, 30, Rue des Amateurs-Populaire, Paris."

SMALL BUT POWERFUL STEAM HAMMER,

En-
on. USED IN HER MAJESTY'S LAUNDRY.
WUTHERSPOON, MACKAY, and Co., 66, Queen-street, Cheapside, London, 14

[illegible]

MINES NOT HAVING SOLD ORES

MINES NOT HAVING SOLD ORDS.				Shares.				Paid.				Price.				Shares.				Paid.				Price.			
Shares.		Paid.	Price.	Shares.		Paid.	Price.	Shares.		Paid.	Price.	Shares.		Paid.	Price.	Shares.		Paid.	Price.	Shares.		Paid.	Price.				
20000	Angarrack Consols.	1	1 1/2	10000	St. Duke of Wel. Con.	1	1 1/2	21000	South Devon Consols	1	1	10000	South Herodotus	1	1	3072	South-Whetlawy	1	1 1/2	10000	South Herodotus	1	1				
10000	Arundell Copper	...	1 1/2	10000	Great Treburses	3072	South-Whetlawy	1	1 1/2	10000	South Herodotus	1	1	3072	South-Whetlawy	1	1 1/2	10000	South Herodotus	1	1				
12000	Bannow, Wexford	1a	...	10000	Haven & Henhwa...	1024	South Wheel Alfred	10000	South Herodotus	1	1	1024	South Wheel Alfred	10000	South Herodotus	1	1				
1800	Bien Caylen (lead)	£1 1 6	...	4096	Herodotus Consols	1000	South Wheel Level	13s.	...	10000	South Herodotus	1	1	1000	South Wheel Level	13s.	...	10000	South Herodotus	1	1				
5000	Bodelwy, S. Wales	£1 7	...	5000	Herodotus Comb	1 1/2	...	4000	South Wheel Russell	13s.	...	4000	South Wheel Russell	13s.	...	4000	South Wheel Russell	13s.	...	4000	South Wheel Russell	13s.	...				
6000	Bolton Consols	...	1 1/2	30000	Irish Consols	10000	Talliesin, Cardigansh.	2 1/2	...	10000	Talliesin, Cardigansh.	2 1/2	...	10000	Talliesin, Cardigansh.	2 1/2	...	10000	Talliesin, Cardigansh.	2 1/2	...				
1180	Bridford Consols	£3 9	...	1024	Ivy Tor Consols	£1 18 6	...	8000	Teign Maria	1800	Teign Maria	1800	Teign Maria	1800	Teign Maria				
812	Butterdon (lead)	...	5 1/2	20000	Kerry (lead)	...	1	12000	Teign Maria	12000	Teign Maria	12000	Teign Maria	12000	Teign Maria				
5060	Callington Valley Com.	1	...	20000	Kilrann, Donegal	3s.	...	4000	Tremollet Down	4000	Tremollet Down	4000	Tremollet Down	4000	Tremollet Down				
6000	Caradon Wood (lead)	£1 4 6	...	12000	Knockstrelane, Irel.	1	...	4000	Tremollet Down	4000	Tremollet Down	4000	Tremollet Down	4000	Tremollet Down				
30000	Carbery West, Ireland	...	3 1/2	12000	Lake Grey le	1	...	4000	Tremollet Down	4000	Tremollet Down	4000	Tremollet Down	4000	Tremollet Down				
9400	Carvath United	2	...	9678	Leigh...	2 1/2	...	2048	West Goginan, Card.	1 1/2	...	2048	West Goginan, Card.	1 1/2	...	2048	West Goginan, Card.	1 1/2	...	2048	West Goginan, Card.	1 1/2	...				
10000	Caton (silver-lead)	...	2	328	Nest Force, Alston	1 1/2	...	236	West Sharp Tor	236	West Sharp Tor	236	West Sharp Tor	236	West Sharp Tor				
4422	Cefnnewydd, Cardigan	£1 13 6	...	5000	New Copper Bottom	1 1/2	...	12000	West Stratford	5000	West Stratford	5000	West Stratford	5000	West Stratford				
12000	Christow (all-lead)	4	...	4096	New East Crowndale	£1 8 6	...	5000	West Wh. Friendship	5000	West Wh. Friendship	5000	West Wh. Friendship	5000	West Wh. Friendship				
1000	Collacombe	10	...	3072	Newton St. Cyres	1	...	250	North Crenay (cop.)	1 1/2	...	250	North Crenay (cop.)	1 1/2	...	250	North Crenay (cop.)	1 1/2	...	250	North Crenay (cop.)	1 1/2	...				
5000	Combmartin Consols	S. 6d.	...	1024	New Wh. Friendsh.	356	North Fowey (cop.)	1 1/2	...	356	North Fowey (cop.)	1 1/2	...	356	North Fowey (cop.)	1 1/2	...	356	North Fowey (cop.)	1 1/2	...				
5000	Combustion United	12s.	...	250	North Crenay (cop.)	1 1/2	...	150000	North of Ireland	1	...	150000	North of Ireland	1	...	150000	North of Ireland	1	...	150000	North of Ireland	1	...				
5000	Cuddra (copper)	1	...	128	Oakeley (cop. gold)	35	...	8000	Oalla, Limerick	1	...	8000	Oalla, Limerick	1	...	8000	Oalla, Limerick	1	...	8000	Oalla, Limerick	1	...				
2400	Cwm Consols (tin)	1 1/2	...	8000	Oakeley (cop. gold)	35	...	5000	Pendons Consols	1 1/2	...	5000	Pendons Consols	1 1/2	...	5000	Pendons Consols	1 1/2	...	5000	Pendons Consols	1 1/2	...				
6000	Cwm Elgia, Carnar.	1	...	4000	Penpennons, Wales	4000	Penpennons, Wales	4000	Penpennons, Wales	4000	Penpennons, Wales	4000	Penpennons, Wales				
12000	Ditto	1	...	7619	Pennquenn, St. Breock	12000	Perran (silver-lead)	12000	Perran (silver-lead)	12000	Perran (silver-lead)	12000	Perran (silver-lead)				
8000	Cwmbathra	1 1/2	...	12000	Perran (silver-lead)	4000	Perran Wheel Jane	£1 3	...	4000	Perran Wheel Jane	£1 3	...	4000	Perran Wheel Jane	£1 3	...	4000	Perran Wheel Jane	£1 3	...				
5000	Devon Central (cop.)	1	...	10000	Polygonth & Woodloose	1 1/2	...	30000	Perran Wheel Alfred	30000	Perran Wheel Alfred	30000	Perran Wheel Alfred	30000	Perran Wheel Alfred				
5000	Devon United	1	...	4000	Perran Wheel Jane	£1 3	...	4000	Perran Wheel Alfred	4000	Perran Wheel Alfred	4000	Perran Wheel Alfred	4000	Perran Wheel Alfred				
8000	Dinas Great Consols	10000	Perran Wheel Alfred	4000	Perran Wheel Alfred	4000	Perran Wheel Alfred	4000	Perran Wheel Alfred	4000	Perran Wheel Alfred				
30000	Drenewsteington	10000	Perran Wheel Alfred	4000	Perran Wheel Alfred	4000	Perran Wheel Alfred	4000	Perran Wheel Alfred	4000	Perran Wheel Alfred				
10000	Dunstable Wh. Phœnix	1	...	10000	Perran Wheel Alfred	4000	Perran Wheel Alfred	4000	Perran Wheel Alfred	4000	Perran Wheel Alfred	4000	Perran Wheel Alfred				
30900	East Annagh (lead)	10000	Perran Wheel Alfred	4000	Perran Wheel Alfred	4000	Perran Wheel Alfred	4000	Perran Wheel Alfred	4000	Perran Wheel Alfred				
5000	East Bideford (cop.)	12s. 6d.	...	10000	Perran Wheel Alfred	4000	Perran Wheel Alfred	4000	Perran Wheel Alfred	4000	Perran Wheel Alfred	4000	Perran Wheel Alfred				
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6144	East Carden (cop.)	1 1/2	...	10000	Perran Wheel Alfred	4000	Perran Wheel Alfred	4000	Perran Wheel Alfred	4000	Perran Wheel Alfred	4000	Perran Wheel Alfred				
5500	East Froglough (lead)	...	1 1/2	10000	Perran Wheel Alfred	4000	Perran Wheel Alfred	4000	Perran Wheel Alfred	4000	Perran Wheel Alfred	4000	Perran Wheel Alfred				
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4096	Exmoor Eliza (cop.)	£2 14 0	...	10000	Perran Wheel Alfred	4000	Perran Wheel Alfred	4000	Perran Wheel Alfred	4000	Perran Wheel Alfred	4000	Perran Wheel Alfred				
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Shares.	Paid
1000 Bradford (lead) Wales	

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